

ASTRUP



1938

CATALOG

AWNING & TENT
HARDWARE & SUPPLIES

The ASTRUP CO.

Awning, Tent and Canopy Hardware and Supplies

Manufacturers of
CHAIN, BEVEL GEAR, and
WORM GEAR ROLLER
AWNING FIXTURES



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THE ASTRUP CO.

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TO THE TRADE

WE ARE very glad indeed, to place in your hands the 29th Astrup Awning Hardware Catalog, in which is listed and described the complete requirements in Awning Hardware, for every type of awning construction.

The material shown represents the latest types used by the leading awning manufacturers. In compiling this catalog our aim has been to make it a reference book on awning construction. To accomplish this, we have at all times, kept in mind the viewpoint of the awning man both with regard to the material listed and to a clear and logical arrangement for easy reference. We hope that you will find it useful.

We are always pleased to receive suggestions, which will assist us in our efforts to so improve our line that it will more nearly meet the requirements of the trade.

Thank you for your patronage during the past season.

THE ASTRUP COMPANY

1876 *Sixty plus One Anniversary* 1937

FOREWORD

ALLOWANCES

Our products are guaranteed to be of the best quality and workmanship. Should any breakage occur, parts will be replaced free of charge at our factory. No charges for labor in making repairs, or alterations, will be allowed unless previously authorized. Claims for shortage must be made within ten days after receipt of goods.

RETURNED GOODS

Our permission must first be obtained before any goods are returned, and then transportation must be prepaid. On regular stock goods, a charge of 10 per cent will be made on the value of such goods to cover expense for packing, handling, cartage, etc. When material is returned because of our error, refunds will be made free of expense to our customers.

ROUTING SHIPMENTS

Customers should specify the routing desired on their orders. If this is not done, we will use our best judgment in selecting route.

RATING

Orders from firms or individuals unknown to us and having no commercial rating, must be accompanied by cash or satisfactory references.

PACKING

Hardware is packed in standard unit packages. When specified in less than standard unit packages a charge of 10% is made to defray cost of additional handling.

ASTRUP AWNING HARDWARE

The Finest That Can Be Made

BECAUSE

Only Certified Shock Proof Malleable Iron is Used.

Our Malleable Iron, with the analysis specified by the Malleable Iron Institute, has a *minimum* tensile strength of 54,000 pounds, and has the proper flexibility to withstand maximum stresses and strains.

That is why Astrup Hardware is much stronger.

BECAUSE

Astrup Hardware is never hard and brittle.

The **Flecto** Process is applied to Astrup Hardware to insure its original ductility and malleability, which is very often lost through the Hot Galvanizing of the castings. Crystallization is eliminated.

This process has been incorporated in Astrup Hardware for over eighteen months. The fact that the United States Government has adopted the **Flecto** Process in its specifications for all malleable iron castings for its own use, is excellent proof of its effectiveness.

This is your insurance and protection against costly repairs occasioned by sudden breakage and failure of hardware.

BECAUSE

Astrup Hardware is Hot Galvanized.

Wherever possible, this type of rust-proofing is used. There is no known method of rust-proofing that is equal to Hot Galvanizing.

Whenever improvements can be made—look to Astrup to introduce them.

Insist on Astrup Awning Hardware—made first to last.

SECTION I

ROLLER GEAR FIXTURES

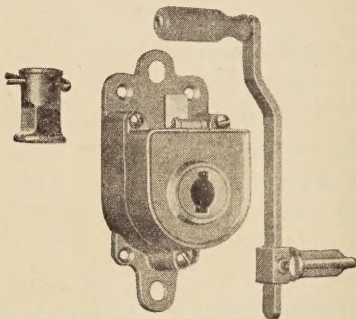
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BEVEL GEAR BOX WITH A GRAVITY LOCK

Patented

Finished in Aluminized or Galvanized
Malleable Iron



Style No. 107
With Safety Lug

This is an automatic double locking box. Inserting the handle key and then lifting the safety clutch unlocks the box, and setting the clutch and withdrawing the key relocks it.

All the parts are made of the best grade of malleable iron with the exception of the case-hardened steel lock, thus assuring the strongest construction known. The Steel Handle Bar is adjustable, so use can be made of it in close corners, and by its adjustment to different lengths it can be made to create more power for winding up larger awnings.

When furnished without safety lug this style gear box is known as Style 1700.

Nameplates will be furnished at no extra charge on Gear Box purchases of 25 or more.

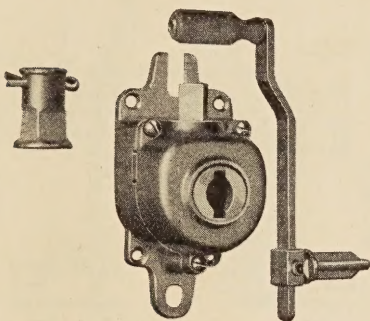
It takes a $\frac{3}{4}$ -inch round iron drive rod unless especially ordered to be fitted for $\frac{5}{8}$ -inch square, $\frac{5}{8}$ -inch round iron or $\frac{1}{2}$ -inch pipe drive rod.

Please specify when ordering.

BEVEL GEAR BOX WITH A GRAVITY LOCK

Patented

Finished in Aluminized or Galvanized
Malleable Iron



Style No. 109

This is a small, compactly built box, with an automatic locking device. Especially constructed for use in small and confined places.

All parts are made of the best grade of malleable iron with the exception of the case-hardened steel lock, thus assuring the strongest construction known. The steel handle bar is adjustable, so use can be made of it in close corners, and by its adjustment to different lengths, it can be made to create more power for operating larger awnings.

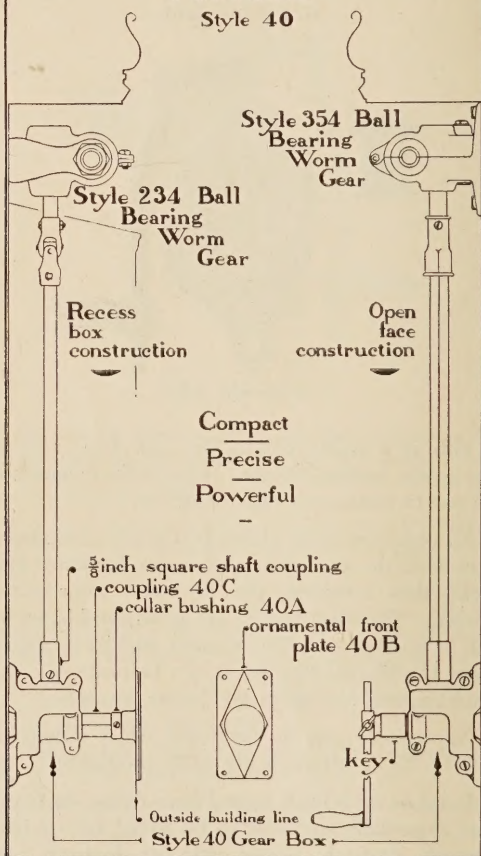
Nameplates can be furnished when ordered in lots of 25 at fifteen cents each additional.

It takes a $\frac{3}{4}$ -inch round iron drive shaft unless especially ordered to be fitted for $\frac{5}{8}$ -inch square, $\frac{5}{8}$ -inch round iron or $\frac{1}{2}$ -inch pipe drive rod.

Please specify when ordering.

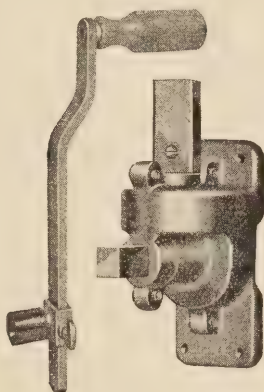
BRONZE OPERATING FIXTURE

Style 40



BRONZE OPERATING FIXTURES

Can also be finished in Cadmium, Chromium
or Oxidized Plate



Style 40 Gear Box

Specially designed for installation in small and confined places, such as inside masonry jamb, or in the trim at one side of window. This box is very compact, being slightly less than $2\frac{1}{4}$ " wide x $4\frac{3}{4}$ " long. The enclosed gears are machine cut bronze, insuring smoothness in operation, strength, and long wear.

The gear described above should always be used with ball bearing worm-gears to obtain best results.

Style 40 Gear Box with handle, including key, and one $\frac{5}{8}$ -inch square shaft coupling.....	Each
Style 40A Collar Bushing.....	
Style 40B Ornamental Plate.....	
Style 40C $\frac{5}{8}$ -inch Square Coupling.....	

Unless otherwise specified, orders will be filled only with Box including key, handle and one shaft coupling. If desired, collar bushing and ornamental plate should be specified.

Illustration on opposite page shows various methods of installation.

NOTE: When two control gears are used side by side, one to operate the Lid Gear and the other to operate the Awning Gear, a special Ornamental Plate with two key holes can be supplied. This plate is $5\frac{1}{8}$ " square.

BRONZE OPERATING FIXTURE

Style 42

Style 354 Ball
Bearing
Worm
Gear

Style 234 Ball
Bearing
Worm
Gear

Recess
box
construction

Open
face
construction

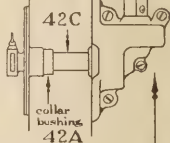
Permanent
Practical
Attractive

$\frac{5}{8}$ inch square shaft coupling
outside building line
inside building line

fixture built in
wall



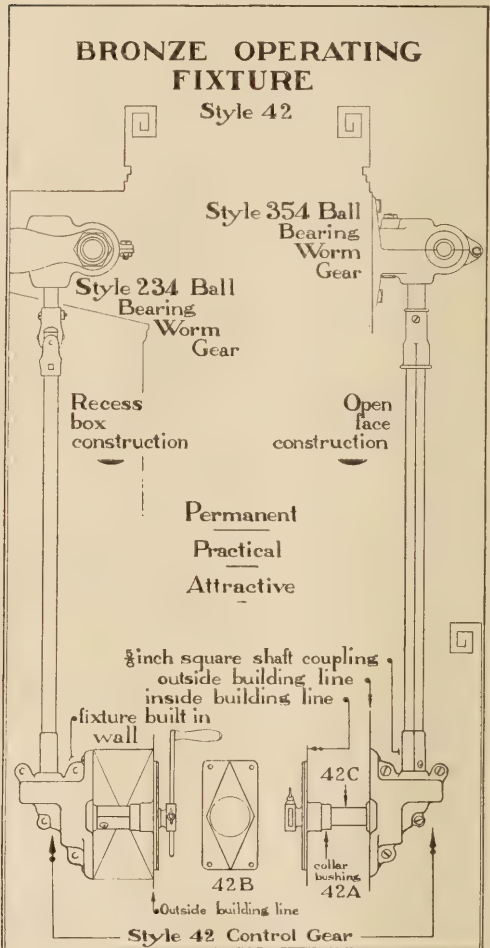
42B



42C
collar
bushing
42A

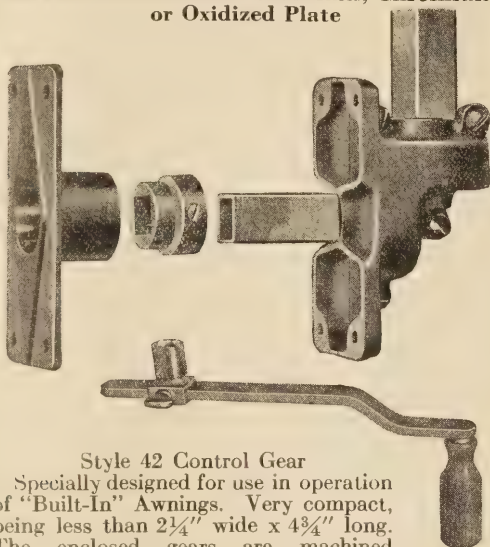
Outside building line

Style 42 Control Gear



BRONZE CONTROL GEAR

Can also be finished in Cadmium, Chromium,
or Oxidized Plate



Style 42 Control Gear

Specially designed for use in operation of "Built-In" Awnings. Very compact, being less than $2\frac{1}{4}$ " wide x $4\frac{3}{4}$ " long. The enclosed gears are machined bronze, accurately fitted, insuring smoothness in operation, strength, and long wear.

Ornamental Wall Plates of attractive design can be furnished to conceal any unsightly brick surface, where hole has been drilled to join shaft on gear and key. A bushing is also provided for placing into round hole in plate, so that drive shaft from gear to key is concentric and smooth operating.

The gear described above should be used with ball bearing worm gears to obtain best results.

Style 42 Control Gear with handle, including key and two $\frac{5}{8}$ -inch square shaft couplings

Each

Style 42A Collar Bushing

Style 42B Ornamental Plate

Style 42C $\frac{5}{8}$ -inch Square Coupling

Unless otherwise specified, order will be filled only with Control Gear with two shaft couplings and handle with key. If desired, collar bushings, and ornamental plate should be specified.

Illustration on opposite page shows various methods of installation.

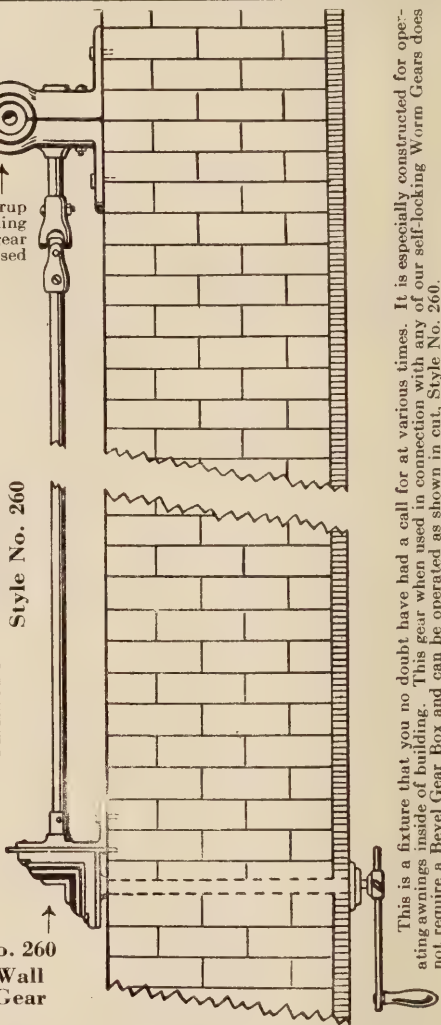
NOTE: When two control gears are used side by side, one to operate the Lid Gear and the other to operate the Awning Gear, a special Ornamental Plate with two key holes can be supplied. This plate is $5\frac{1}{8}$ " square.

WALL GEAR

Finished in Aluminized or Galvanized Iron
Style No. 260

No. 260
Wall
Gear

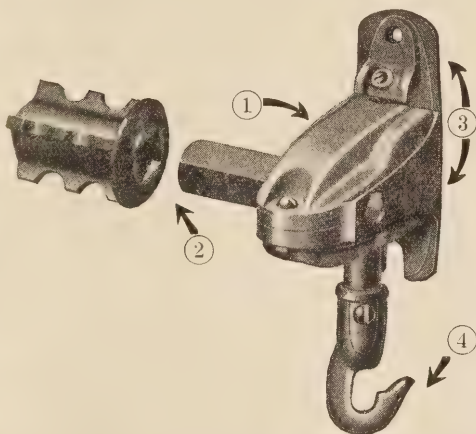
Any Astrup
self-locking
worm gear
can be used
here.



This is a fixture that you no doubt have had a call for at various times. It is especially constructed for operating awnings inside of building. This gear when used in connection with any of our self-locking Worm Gears does not require a Bevel Gear Box and can be operated as shown in cut, Style No. 260.

No.		Each
260	Wall Gear with two $\frac{3}{4}$ -in. Shaft Couplings.....	Alum Galv.
260	Handle and Key Only.....	
260-A	Collar Bushing.....	
260-B	Ornamental Plate.....	
Key Shaft $\frac{5}{8}$ -in. square x 14-in. long, fitted to inside of No. 260 Wall Gear Coupling.....		

For 1938
ASTRUP OFFERS CONTINUED PROGRESS
IN WORM GEARS



1. Modernized, streamlined "Zephyr" Worm Gear Cases, to match and conform with modern store front architecture. "Zephyr" Worm Gears are available for all open face construction.

2. All Astrup Worm Gears fitted with pipe or tube gudgeons, are equipped with square shaft for "Slip On" application, unless otherwise specified.

This feature simplifies erection of Worm Gears and Awning Roller. It also reduces erection expense.

"Slip On" Worm Gears can be bolted onto the building without dismantling the case or the enclosed gears. The steel square shaft is long enough to provide sufficient bearing surface for the gudgeon, and allows for adjustment, if the awning roller has been cut too long or too short.

Reduce erection costs by using "Slip On" Worm Gears. This superior feature is offered in Astrup Worm Gears at no advance in price.

3. Maximum bearing surface for rigid fastening.

4. All hooks fitted on Astrup Worm Gears are specially designed to eliminate the possibility of the winding shaft slipping off while in operation. Accidental damage to store front or window glass is avoided. This is an exclusive Astrup feature.

NOTE: All Worm Gears fitted with wood gudgeons or wood plugs will continue to be furnished with round shafts, because their design makes them essentially a "Slip On" type of gudgeon.

GENERAL SPECIFICATIONS

For your convenience, we list below information that we believe will assist you in selecting the proper style Astrup Worm Gear for your every require-

Style Worm Gear	Open or Recess	Operating Capacity		Kind of Gears
		With Box	With Hook	
*100	Open	60'	30'	Steel
†*130	Recess	60'	30'	Steel
†*134†	Recess	70'	35'	Steel
†*136†	Recess	100'	60'	Steel
*140†	Open	100'	60'	Steel
*154†	Open	70'	35'	Steel
180†	Open	100'	60'	Steel
185	Open	100'	50'	Steel
187	Open	100'	50'	Steel
190	Open	30'	Use	Malleable
192	Open	30'	Only	Malleable
194	Open	30'	With	Malleable
†198	Open	30'	Boxes	Malleable
†230	Recess	60'	30'	Steel
†233	Recess	60'	30'	Steel
†234†	Recess	70'	35'	Steel
†236†	Recess	100'	60'	Steel
250	Open	60'	30'	Steel
252	Open	60'	30'	Steel
254	Open	60'	30'	Steel
†258	Open	60'	30'	Steel
270	Open	50'	25'	Malleable
272	Open	50'	25'	Malleable
274	Open	50'	25'	Malleable
†278	Open	50'	25'	Malleable
354†	Open	70'	35'	Steel
†2300	Recess	50'	25'	Malleable
†2333	Recess	50'	25'	Malleable

* All gears so indicated have bronze cases.

† All gears so indicated have horizontal back plates;
all other gears NOT so indicated have vertical
back plates.

OF ASTRUP WORM GEARS

ment. See complete description and illustrations on the pages following.

Self Locking?	Top Rod Brkt?	Overall Measurements of Back Plate		Projection to Center of Roller	Use Blank End No.
		Horizontal	Vertical		
Yes	Yes	2 $\frac{1}{8}$ "	6 "	3 "	101
Yes	No	3 $\frac{7}{8}$ "	2 "	3 "	131
Yes	No	3 $\frac{7}{8}$ "	2 "	3 $\frac{1}{2}$ "	142
Yes	No	6 "	3 "	3 $\frac{1}{2}$ "	142
Yes	No	2 $\frac{5}{8}$ "	6 $\frac{1}{8}$ "	3 $\frac{1}{2}$ "	141
Yes	No	2 $\frac{1}{8}$ "	6 "	3 $\frac{1}{2}$ "	141
Yes	No	2 $\frac{5}{8}$ "	6 $\frac{1}{8}$ "	3 $\frac{1}{2}$ "	181
Yes	Yes	2 $\frac{5}{8}$ "	6 $\frac{1}{8}$ "	3 $\frac{1}{2}$ "	2
Yes	No	2 $\frac{5}{8}$ "	6 $\frac{1}{8}$ "	3 $\frac{1}{2}$ "	2
No	No	2 $\frac{1}{8}$ "	6 "	3 "	1
No	Yes	2 $\frac{1}{8}$ "	6 "	3 "	1
No	Yes	2 $\frac{1}{8}$ "	6 "	3 $\frac{1}{2}$ "	2
No	No	4 $\frac{5}{8}$ "	2 $\frac{1}{8}$ "	3 $\frac{1}{2}$ "	5
Yes	No	3 $\frac{7}{8}$ "	2 "	3 "	4
Yes	No	3 $\frac{7}{8}$ "	2 "	3 $\frac{1}{2}$ "	3
Yes	No	3 $\frac{7}{8}$ "	2 "	3 $\frac{1}{2}$ "	182
Yes	No	6 "	3 "	3 $\frac{1}{2}$ "	182
Yes	No	2 $\frac{1}{8}$ "	6 "	3 "	1
Yes	Yes	2 $\frac{1}{8}$ "	6 "	3 "	1
Yes	Yes	2 $\frac{1}{8}$ "	6 "	3 $\frac{1}{2}$ "	2
Yes	No	4 $\frac{5}{8}$ "	2 $\frac{1}{8}$ "	3 $\frac{1}{2}$ "	5
Yes	No	2 $\frac{1}{8}$ "	6 "	3 "	1
Yes	Yes	2 $\frac{1}{8}$ "	6 "	3 "	1
Yes	Yes	2 $\frac{1}{8}$ "	6 "	3 $\frac{1}{2}$ "	2
Yes	No	4 $\frac{5}{8}$ "	2 $\frac{1}{8}$ "	3 $\frac{1}{2}$ "	5
Yes	No	2 $\frac{1}{8}$ "	6 "	3 $\frac{1}{2}$ "	181
Yes	No	3 $\frac{7}{8}$ "	2 "	3 "	4
Yes	No	3 $\frac{7}{8}$ "	2 "	3 $\frac{1}{2}$ "	3

† All gears so indicated are fitted with Ball Bearings on both horizontal and vertical shafts.

NOTE: All Self-Locking Worm Gears can be operated by hook and winding key construction.

BALL BEARING "ZEPHYR" WORM GEAR

Self Locking

Patented

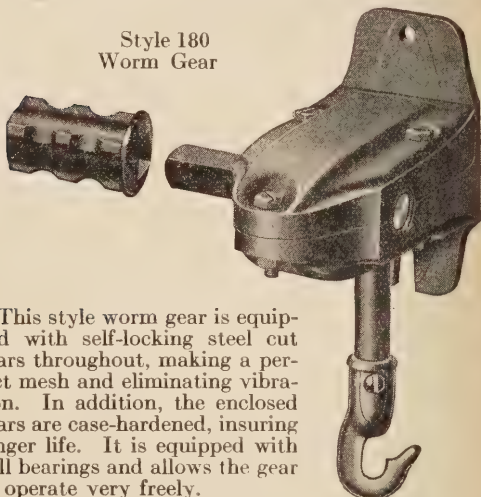
Patent No. 1,813,524

Furnished in Aluminized, Galvanized Iron or
Solid Bronze

Projection to center of roller $3\frac{1}{2}$ inches

Gear ratio: ten (10) revolutions of shaft to one
complete revolution of roller

Style 180
Worm Gear



This style worm gear is equipped with self-locking steel cut gears throughout, making a perfect mesh and eliminating vibration. In addition, the enclosed gears are case-hardened, insuring longer life. It is equipped with ball bearings and allows the gear to operate very freely.

Recommended on unusually large roller awnings. This ball bearing worm gear will be found very serviceable and is well worth any additional cost. We suggest that Style No. 181 Ball Bearing Roller Bracket be used to give most satisfactory results.

While Alemite grease cups can be furnished at no extra charge, standard equipment will be without grease cups. Please specify when ordering the proper equipment.

We fit this gear for any size pipe, wood or tube rollers.

Fitted for $\frac{5}{8}$ -inch and $\frac{3}{4}$ -inch round, $\frac{5}{8}$ -inch square iron or $\frac{1}{2}$ -inch pipe universal joint.

This gear can be equipped with universal joint at no additional charge.

Our Style 140 Worm Gear is of solid bronze but is of the same design and construction as our Style 180 Worm Gear.

BALL BEARING "ZEPHYR" WORM GEAR

Self Locking

Patented
Patent No. 1,813,524

Furnished in Aluminized, Galvanized Iron or
Solid Bronze

Projection to center of roller $3\frac{1}{2}$ inches

Gear ratio: seven and one-half ($7\frac{1}{2}$) revolutions of shaft to one complete revolution of roller

This style worm gear is equipped with self-locking steel cut gears throughout, making a perfect mesh and eliminating vibration. It is also equipped with ball bearings which allow the gear to operate very freely.

Recommended to operate awnings up to 35 feet in length, when operated with hook and long winding brace.

We suggest that Style No. 181 Ball Bearing Roller Bracket be used to give most satisfactory results.

While Alemite Grease Cups can be furnished at no extra charge, standard equipment will be without grease cups. Please specify when ordering the proper equipment.

We fit this gear for any size pipe, wood or tube rollers.

Fitted for $\frac{5}{8}$ -inch and $\frac{3}{4}$ -inch round, $\frac{5}{8}$ -inch square iron or $\frac{1}{2}$ -inch pipe universal joint.

This gear can be equipped with universal joint at no additional charge.

Our Style 154 Worm Gear is of solid bronze but is of the same design and construction as our Style 354 Worm Gear.



Style 354
Worm Gear

BALL BEARING ROLLER BRACKETS AND GUDGEON

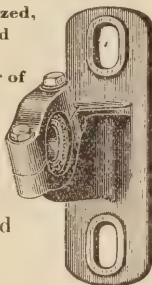
Vertical Back Plate

Furnished in Aluminized,
Galvanized or Solid
Bronze

Projection to center of
roller $3\frac{1}{2}$ inches



Style 181 Blank End
includes Gudgeon



When this Ball Bearing Roller Bracket is used in connection with our Styles 180 and 354 Worm Gears, the awning will render exceptionally fine service and will operate very freely.

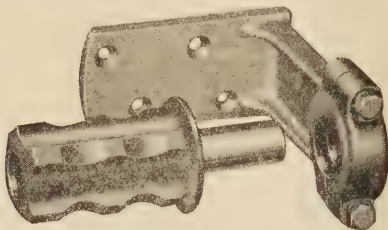
The inside diameter of the Ball Bearing Roller is $\frac{3}{4}$ -inch, and can therefore be used with any of the various sized gudgeons we manufacture.

Our Style 141 Blank End is of solid bronze but is of same design and construction as our Style 181 Blank End. Recommended for use with Styles 140 and 154 Bronze Ball Bearing Worm Gears.

Horizontal Back Plate

Furnished in Aluminized, Galvanized Iron or Solid
Bronze

Projection to center of roller $3\frac{1}{2}$ inches



Style 182 Blank End
includes Gudgeon

For use in connection with Styles 234 and 236 Worm Gears or where horizontal fastening is desired.

The inside diameter of the Ball Bearing Roller is $\frac{3}{4}$ -inch, and can therefore be used with any of the various sized gudgeons we manufacture.

Our style 142 Blank End is of solid bronze but is of same design and construction as our Style 182 Blank End. Recommended for use with Style 134 Bronze Ball Bearing Worm Gear.

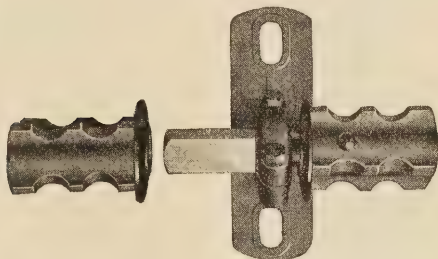
BALL BEARING ROLLER SUPPORTS

For Split Type Awnings

Furnished in Aluminized, Galvanized Iron or Solid Bronze

Projection to center of roller $3\frac{1}{2}$ inches

Vertical Back Plate

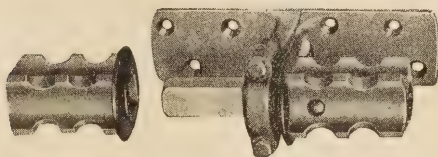


Style 1810

These supports are most practical when necessary to construct one awning over a series of display windows. The canvas covering is made in widths corresponding to spacing of supports.

Our Style 1410 Center Support is of solid bronze but is of same design and construction as our Style 1810 Center Support.

Horizontal Back Plate



Style 1820

These supports can be fitted with any size gudgeon to fit pipe, tube or wood roller. Equipped with ball bearing for smooth operation.

One end of the support has a square shaft and likewise is fitted with a square shaft "Slip-On" Gudgeon. This assembly permits both gudgeons of support to be riveted to awning roller in shop.

Complete instructions as to proper installation sent with shipment.

Our Style 1420 Center Support is of solid bronze but is of same design and construction as our Style 1820 Center Support.

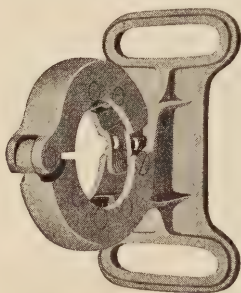
ROLLER BEARING CENTER SUPPORT BRACKETS

With Bronze Rollers

Patent No. 1,937,341

Finished in Aluminized or Galvanized Iron

Made in 3 and 3½ inch projection



These brackets are used for the support of split or double awnings. The awning roller revolves and bears directly on the support bracket. The bronze rollers prevent any possibility of corrosion and consequent binding. The rollers are always free operating. Because of the patented design and construction (that is the

hinge opening feature) the supports can be installed on rollers already erected, and it is not necessary to dismantle roller to place these supports in position.

Supports are designed with horizontal oblong holes for adjustment.

Supports are designed so that only a one and one-half (1½") inch opening is required between awnings.

3 Inch Projection

		Each	
		Alum.	Galv.
No. 15	For 1¼ inch and 1½ inch pipe; 1⅝ inch and 1 9/10 inch tube.....		
No. 16	For 2 inch pipe; 2 inch, 2¼ inch and 2⅜ inch tube....		

3½ Inch Projection

No. 19	For 1¼ inch and 1½ inch pipe; 1⅝ inch and 1 9/10 inch tube.....
No. 20	For 2 inch pipe; 2 inch, 2¼ inch and 2⅜ inch tube....
No. 21	For 2½ inch tube.....

All brackets are fitted with screws at center hinge so that top can be removed when necessary for installation in recess awning boxes or under awning hoods.

SPRING ROLLERS WITH BRACKET

For Split Awnings
Galvanized



Each

1½-inch diameter by 18 inches long . . .

1½-inch diameter by 30 inches long . . .

1¾-inch diameter by 24 inches long . . .

2 -inch diameter by 30 inches long . . .

To be placed immediately below Styles 1810 and 1820 center supports when used on split type awning and when under cover is wanted to close up the opening.

Complete instructions as to proper installation sent with shipment.

CENTER SUPPORT BRACKETS

Finished in Aluminized or Galvanized Iron
Projection to center of roller 3 inches



These brackets are used for the support of split or double awnings. The pipe revolves and bears directly on the support bracket.

Each
Alum Galv.

Style 2 For 1¼" pipe and 1⅝" tube .

Style 3 For 1½" pipe and 1⅞" tube .

Style 4 For 2" pipe and 2⅜" tube . . .

“ZEPHYR” WORM GEARS

Self Locking

Finished in Aluminized or Galvanized Iron
Projection to center of roller $3\frac{1}{2}$ inches

Gear ratio: ten (10) revolutions of shaft to
one complete revolution of roller



Style 185

**Worm Gear
With
Rod Holder**

**When ordering without Rod
Holder, specify Style 187
Worm Gear.**

These worm gears are self locking and never get out of order. We guarantee them to operate any awning with ease using an Astrup Bevel Gear Box to turn the shaft.

They can also be used to operate roller awnings up to 50 feet long with hook and long winding key.

The Style 185 Worm Gear has as standard equipment the top rod bracket which holds the rod to tie the end curtain on, and is so constructed that the enclosed gears may be removed with the entire roller by merely loosening the bolts in the top rod bracket.

Fitted for $\frac{5}{8}$ -inch and $\frac{3}{4}$ -inch round iron,
 $\frac{5}{8}$ -inch square iron or $\frac{1}{2}$ -inch pipe drive rod.

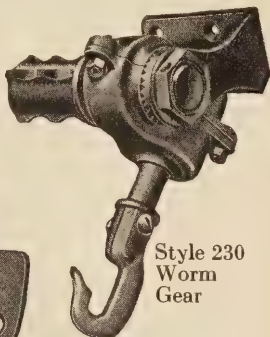
RECESS BOX WORM GEARS

With Adjustable Bracket
Self Locking
Patent applied for

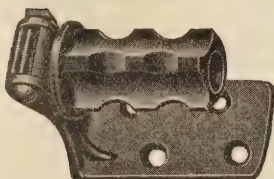
Finished in Aluminized or Galvanized Iron
Projection to center of roller 3 inches.



Cut
indicates
various
positions in
which drive
shaft can
be
adjusted.



Style 230
Worm
Gear



Style 4 Blank End

This worm gear is small in appearance and compactly designed for recess box construction. It is equipped with bracket and lock nut permitting the adjustment of the drive shaft at all angles.

The gears are reversible and can be used on either end of awning by reversing the shaft and worm of the worm gear.

The enclosed gears are steel cut and self-locking allowing the use of hook and eye construction if desired.

(Our Style 130) Worm Gear is of solid bronze but is of the same design and construction as our Style 230 Worm Gear, with enclosed cut steel gears. Use No. 131 Bronze Blank End in connection.

Style 233 Worm Gear is identical in design and construction to Style 230 Worm Gear, except that it has a $3\frac{1}{2}$ " projection. Use Style 3 Blank End in connection.

Style 2333 Worm Gear is identical in design and construction to Style 233 Worm Gear, except enclosed self-locking gears are furnished in malleable iron.

Style 2300 Worm Gear is identical in design and construction to Style 230 Worm Gear, except enclosed self-locking gears are furnished in malleable iron.

RECESS BOX BALL BEARING WORM GEAR

With Adjustable Bracket

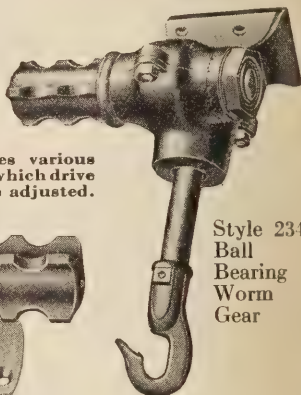
Self Locking

Patent applied for

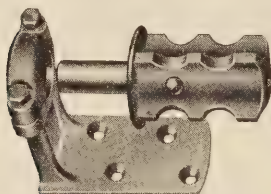
Finished in Aluminized or Galvanized Iron
Projection to center of roller $3\frac{1}{2}$ inches



Cut indicates various
positions in which drive
shaft can be adjusted.



Style 234
Ball
Bearing
Worm
Gear



Style 182
Ball Bearing Blank End .

This style worm gear is equipped with self-locking steel cut gears throughout, making a perfect mesh and eliminating vibration. It is also equipped with ball bearings which allow the gear to operate very freely.

It is designed particularly for recess box construction. It is equipped with bracket and lock nut permitting adjustment of the drive shaft at all angles.

To adjust, loosen the lock nut, set gear to desired angle and then tighten lock nut.

The gears are reversible and can be used on either end of awning by reversing the shaft and worm of the worm gear.

Gear can be fitted for any of the following size drive shafts; $\frac{5}{8}$ -inch and $\frac{3}{4}$ -inch round iron, $\frac{1}{2}$ -inch pipe and $\frac{5}{8}$ -inch square iron.

(Our Style 134) Worm Gear is of solid bronze but is of the same design and construction as our Style 234 Worm Gear.

Use No. 112 Bronze Blank End in connection.

While Alemite grease cups can be furnished at no extra charge, standard equipment will be without grease cups. Please specify when ordering the proper equipment.

RECESS BOX BALL BEARING WORM GEAR FOR LARGE AWNINGS

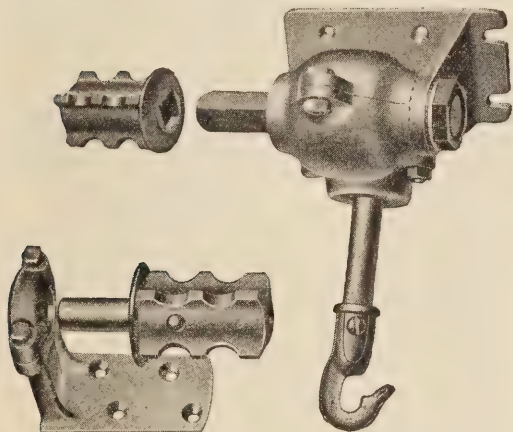
With Adjustable Bracket

Self Locking

Patent applied for

Finished in Aluminized or Galvanized Iron

Projection to center of roller $3\frac{1}{2}$ inches



Style 182

Ball Bearing Blank End

Style 236

Ball Bearing Worm Gear

This style worm gear is equipped with self-locking steel cut gears throughout, making a perfect mesh and eliminating vibration.

This Worm Gear was essentially designed for recess box construction, where a big, powerfully built and smooth operating gear is required to operate awnings up to 60 feet in length, with hook and winding brace. However, it can also be installed on any horizontal transom bar.

The gears are reversible and can be used on either end of awning by reversing the shaft and worm of the worm gear.

This style Worm Gear can be fitted with any catalogued size gudgeon or universal joint.

Our Style 136 Worm Gear is of solid bronze but is of the same design and construction as Style 236 Worm Gear.

Use Style 112 Bronze Blank End in connection.

While Alemite grease cups can be furnished at no extra charge, standard equipment will be without grease cups. Please specify when ordering the proper equipment.

NON-SELF-LOCKING "ZEPHYR" WORM GEARS

With Cast Malleable Iron Gears

Furnished in Aluminized or Galvanized Iron

The Worm Gears described on this page should always be used in connection with an Astrup Gear Box, and will operate any ordinary length awning.

Gear ratio: three and one-half ($3\frac{1}{2}$) revolutions of shaft to one complete revolution of roller.

DESCRIPTION

Style 190. Projection to center of roller 3 inches. This gear is **not** furnished with an end curtain rod holder. The case is held securely by bolts.

Enclosed gears are malleable non-self-locking. Recommended for use on 1-inch, $1\frac{1}{4}$ -inch, $1\frac{1}{2}$ -inch pipe, $1\frac{5}{8}$ -inch, and 1-9/10-inch tube rollers. Use Style 1 Blank End in connection.

Style 192. Projection to center of roller 3 inches. This gear is supplied with top rod holder, to hold a rod to tie the end curtain on.

Enclosed gears same as in Style 190 Worm Gear. Recommended for use on 1-inch, $1\frac{1}{4}$ -inch, $1\frac{1}{2}$ -inch pipe, $1\frac{5}{8}$ -inch, and 1-9/10-inch tube rollers. Use Style 1 Blank End in connection.

Style 194. Projection to center of roller $3\frac{1}{2}$ inches. This style worm gear combines the same enclosed gear features as Style 192 Worm Gear. Recommended for use on 2-inch pipe, $2\frac{3}{8}$ -inch tube, and wood rollers.

It can also be used on $1\frac{1}{2}$ -inch pipe rollers where the wall and projection is so great that there will be a considerable roll of canvas on the roller. Use Style 2 Blank End in connection.

Gears can be fitted for any of the following size drive shafts: $\frac{5}{8}$ -inch and $\frac{3}{4}$ -inch round iron, $\frac{1}{2}$ -inch pipe and $\frac{5}{8}$ -inch square iron.

Gears can be fitted with any size gudgeon as described on page 34.

NON-SELF-LOCKING "ZEPHYR" WORM GEARS

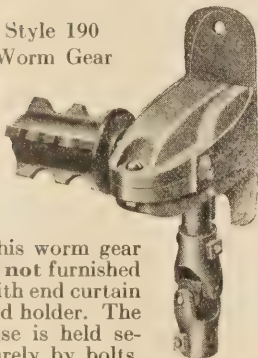
With Cast Malleable Iron Gears

Furnished in Aluminized or Galvanized Iron

See complete descriptive matter on preceding page.

Projection to center of roller 3 inches.

Style 190
Worm Gear



This worm gear is **not** furnished with end curtain rod holder. The case is held securely by bolts.

Style 192
Worm Gear



This type worm gear has as an outstanding feature, the top rod bracket to hold a rod to tie the end curtain on.

Use Style 1 Blank End in connection with Styles 190 and 192 Worm Gears.

Projection to center of roller $3\frac{1}{2}$ inches.

Style 194
Worm Gear



This worm gear combines same features as Style 192 Worm Gear except that it has $3\frac{1}{2}$ -inch projection.

Use Style 2 Blank End.

Although we illustrate the Style 194 Worm Gear with wood gudgeon, it can also be fitted with pipe or tube gudgeon.

SELF-LOCKING "ZEPHYR" WORM GEARS

With Steel Cut Gears

Furnished in Aluminized or Galvanized Iron

The Worm Gears described on this page if used in connection with a gear box will operate an awning up to 60 feet long; if used with hook and long winding key they will operate awnings with ease up to 30 feet in length.

Gear ratio: seven and one-half ($7\frac{1}{2}$) revolutions of shaft to one complete revolution of roller.

DESCRIPTION

Style 250. Projection to center of roller 3 inches. This gear is **not** furnished with an end curtain rod holder. The case is held securely by bolts. Enclosed gears are cut steel, self-locking, and insure smooth operation, and eliminate vibration. Recommended for use on 1-inch, $1\frac{1}{4}$ -inch, $1\frac{1}{2}$ -inch pipe, $1\frac{5}{8}$ -inch, and 1-9/10-inch tube rollers. Use Style 1 Blank End in connection.

Style 252. Projection to center of roller 3 inches. This gear is supplied with top rod holder, to hold a rod to tie the end curtain on. Enclosed gears same as in Style 250 Worm Gear. Recommended for use on 1-inch, $1\frac{1}{4}$ -inch, $1\frac{1}{2}$ -inch pipe, $1\frac{5}{8}$ -inch, and 1-9/10-inch tube rollers. Use Style 1 Blank End in connection.

Style 254. Projection to center of roller $3\frac{1}{2}$ inches. This style worm gear combines the same enclosed gear features as Style 252 Worm Gear.

Recommended for use on 2-inch pipe, $2\frac{3}{8}$ -inch tube, and wood rollers.

It can also be used on $1\frac{1}{2}$ -inch pipe rollers where the wall and projection is so great that there will be a considerable roll of canvas on the roller. Use Style 2 Blank End in connection.

Gears can be fitted for following size drive shafts; $\frac{5}{8}$ -inch and $\frac{3}{4}$ -inch round iron, $\frac{1}{2}$ -inch pipe and $\frac{5}{8}$ -inch square iron.

Gears can be furnished with any size gudgeon as described on page 34.

SELF-LOCKING "ZEPHYR" WORM GEARS

With Steel Cut Gears

Furnished in Aluminized or Galvanized Iron

See complete descriptive matter on preceding page.

Projection to center of roller 3 inches

Style 250
Worm Gear



This worm gear is **not** furnished with end curtain rod holder. The case is held securely by bolts.

Style 252
Worm Gear



This type worm gear has as an outstanding feature, the top rod bracket to hold a rod to tie the end curtain on.

Use Style 1 Blank End in connection with
Styles 250 and 252 Worm Gears.

Projection to center of roller $3\frac{1}{2}$ inches.

Style 254
Worm Gear



This worm gear combines same features as Style 252 Worm Gear, except that it has $3\frac{1}{2}$ -in. projection.

Use Style 2 Blank End

Although we illustrate the Style 254 Worm Gear with wood gudgeon, it can also be fitted with pipe or tube gudgeon.

Worm Gears shown on this page can be fitted with universal joints if desired. If so ordered, specify size drive shaft.

SELF-LOCKING "ZEPHYR" WORM GEARS

With Cast Malleable Iron Gears

Furnished in Aluminized or Galvanized Iron

The Worm Gears described on this page if used in connection with a gear box will operate an awning up to 50 feet long; if used with hook and long winding key, they will operate awnings with ease up to 25 feet in length.

Gear ratio: seven and one-half ($7\frac{1}{2}$) revolutions of shaft to one complete revolution of roller.

DESCRIPTION

Style 270. Projection to center of roller 3 inches. This gear is not furnished with an end curtain rod holder. The case is held securely by bolts. Enclosed gears are malleable iron, self-locking.

Recommended for use on 1-inch, $1\frac{1}{4}$ -inch, $1\frac{1}{2}$ -inch pipe, $1\frac{5}{8}$ -inch, and 1-9/10-inch tube rollers. Use Style 1 Blank End in connection.

Style 272. Projection to center of roller 3 inches. This gear is supplied with top rod holder, to hold a rod to tie the end curtain on. Enclosed gears same as in Style 270 Worm Gear.

Recommended for use on 1-inch, $1\frac{1}{4}$ -inch, $1\frac{1}{2}$ -inch pipe, $1\frac{5}{8}$ -inch, and 1-9/10-inch tube rollers. Use Style 1 Blank End in connection.

Style 274. Projection to center of roller $3\frac{1}{2}$ inches. This style worm gear combines the same enclosed gear features as Style 272 Worm Gear.

Recommended for use on 2-inch pipe, $2\frac{3}{8}$ -inch tube and wood rollers.

It can also be used on $1\frac{1}{2}$ -inch pipe rollers where the wall and projection is so great that there will be a considerable roll of canvas on the roller. Use Style 2 Blank End in connection.

Gears can be fitted for any of the following size drive shafts: $\frac{5}{8}$ -inch and $\frac{3}{4}$ -inch round iron, $\frac{1}{2}$ -inch pipe, and $\frac{5}{8}$ -inch square iron.

Gears can be furnished with any size gudgeon as described on page 34.

SELF-LOCKING "ZEPHYR" WORM GEARS

With Cast Malleable Iron Gears
Furnished in Aluminized or Galvanized Iron
See complete descriptive matter on preceding page.

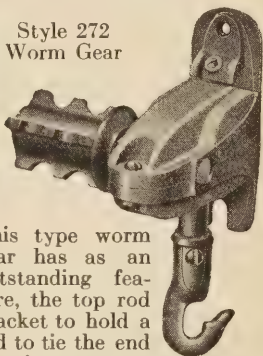
Projection to center of roller 3 inches.

Style 270
Worm Gear



This worm gear is **not** furnished with end curtain rod holder. The case is held securely by bolts.

Style 272
Worm Gear



This type worm gear has as an outstanding feature, the top rod bracket to hold a rod to tie the end curtain on.

Use Style 1 Blank End in connection with
Styles 270 and 272 Worm Gears.

Projection to center of roller $3\frac{1}{2}$ inches.

Style 274
Worm Gear



This worm gear combines same features as Style 272 Worm Gear, except that it has $3\frac{1}{2}$ -in. projection.

Use Style 2 Blank End.

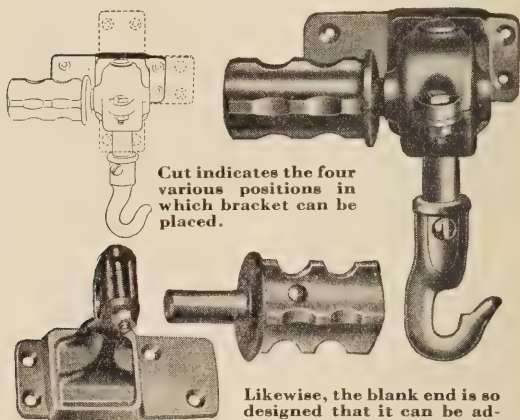
Although we illustrate the Style 274 Worm Gear with wood gudgeon, it can also be fitted with pipe or tube gudgeon.

Worm Gears shown on this page can be fitted with universal joints if desired. If so ordered, specify size drive shaft.

MULTI-POSITION WORM GEARS

Patented
Patent No. 1,799,668

Furnished in Aluminized or Galvanized Iron
Projection to center of roller $3\frac{1}{2}$ inches



Cut indicates the four various positions in which bracket can be placed.

Likewise, the blank end is so designed that it can be adjusted to four positions.

Style 5 Blank End

This is the most flexibly constructed worm gear made. It can be mounted vertically or horizontally on the bracket, and of course on the building. In addition, it combines the advantage of a right or left mounting.

Simple to assemble or change. Strong and rugged in construction—we offer this series of fixtures with the following enclosed inside gears.

No. 198 Malleable Iron Non-Self Locking Enclosed Gears.

No. 258 Steel Cut Self Locking Enclosed Gears.

No. 278 Malleable Iron Self Locking Enclosed Gears.

Style No. 198 Worm Gear being non-self locking should only be used with an Astrup Gear Box.

Style Nos. 258 and 278 Worm Gears being self locking can be equipped with hook.

These gears can be fitted with any size pipe, wood or tube gudgeons.

Fitted for $\frac{5}{8}$ -inch and $\frac{3}{4}$ -inch round, $\frac{5}{8}$ -inch square iron or $\frac{1}{2}$ -inch pipe Universal Joint.

BRONZE WORM GEARS**Self-Locking****Furnished with Solid Bronze Case**

Style No.	Described Page No.	Projection Inches	Use Blank End No.
100	*	3	101.....
130	19	3	131.....
134	20	3½	142.....
136	21	3½	142.....
140	12	3½	141.....
154	13	3½	141.....

*Style No. 100 Worm Gear similar in all respects to Style No. 252 Worm Gear illustrated on page 25, except that Style No. 100 Worm Gear has solid bronze case.

All Worm Gears listed above in addition to being furnished with solid bronze cases are also equipped with steel cut self locking enclosed gears.

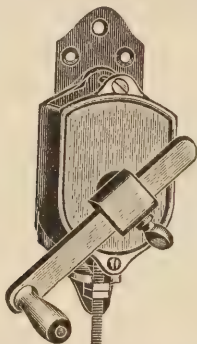
Style Nos. 134, 136, 140 and 154 Worm Gears are also equipped with ball bearings throughout allowing smooth and easy operation.

Solid bronze universal joints can be fitted for any of the following size drive shafts when used with a gear box: 5/8-inch and 3/4-inch round iron, 1/2-inch pipe and 5/8-inch square iron.

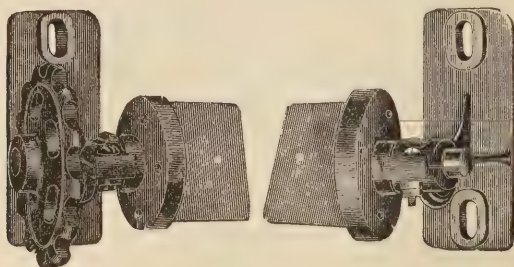
These gears can also be furnished with Style No. 1 Bronze Hook.

CHAIN GEAR FIXTURES

Finished in Aluminized or Galvanized Iron



Style 105 Automatic Self-Locking Box
Will Operate 100-ft. Roller
Fitted for No. 32 Chain



Style 57 Chain End
Fitted for No. 32 Chain

Style 58 Bracket

Mention size of pipe, wood or tubing you use.

LINK BELT CHAIN

Malleable Iron

FOR CHAIN, ROLLER AWNINGS

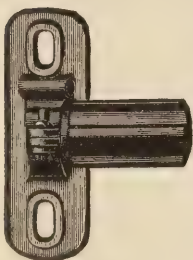


No. 32 Black.

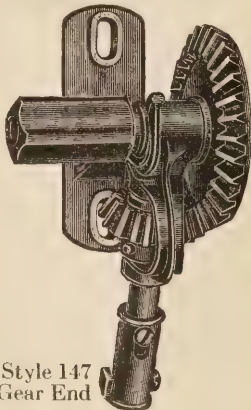
Per Hd.
Feet

No. 32 Galv...

Per Hd.
Feet

STYLE 147 SWINGING GEAR END**With Bracket****Also Top Rod Holder****Patented****Finished in Aluminized or Galvanized Iron****Projection to Center of Roller $3\frac{1}{2}$ Inches**

Style 2
Blank End



Style 147
Gear End

The advantages are that the Small Driving Gear Wheel is securely fastened in a yoke, then set in a hook bracket which gives it a revolving bearing on the gudgeon or end pin, thus allowing the fastening of the bracket to a building with a recess or slanting front, or if necessary, to the ceiling and the revolving motion of the yoke will allow it to be turned in any way to meet the lead or slant of the shaft from the box. All the bearings are machined and the yoke and small gear wheel are fitted close and rigid, so no matter how hard the strain, it will allow no play between the teeth on the two gears and so prevents any slipping. It has also an adjustable collar for fastening the shaft which allows $\frac{1}{2}$ -inch play.

This gear can be fitted for any size pipe, wood or tube roller.

Fitted for $\frac{5}{8}$ -inch and $\frac{3}{4}$ -inch round iron, $\frac{5}{8}$ -inch square iron or $\frac{1}{2}$ -inch pipe drive rod.

UNIVERSAL OR KNUCKLE JOINTS WITH SQUARE KNUCKLES Aluminized or Galvanized



Each
Alum. Galv.

- No. 1 Fits $\frac{5}{8}$ -inch round iron..
- No. 2 Fits $\frac{3}{4}$ -inch round iron..
- No. 4 Fits $\frac{5}{8}$ -inch square iron..
- No. 5 Fits $\frac{1}{2}$ -inch pipe.....
- No. 6 Fits $\frac{3}{4}$ -inch round and
 $\frac{5}{8}$ -inch square iron.....
- No. 7 Fits $\frac{3}{4}$ -inch round and
 $\frac{5}{8}$ -inch round iron... ..
- No. 8 Fits $\frac{3}{4}$ -inch round iron..
and $\frac{1}{2}$ -inch pipe.....

WITH ROUND KNUCKLE Aluminized or Galvanized



Each
Alum. Galv.

- No. 3 Fits $\frac{3}{4}$ -inch round iron..

UPPER SHAFT COUPLING

Finished in Aluminized or
Galvanized Iron



- | | Per Hundred | |
|---|-------------|-------|
| | Alum. | Galv. |
| No. 1 $\frac{5}{8}$ -in. rd. iron
by $\frac{3}{4}$ -in. rd. iron | | |
| No. 2 $\frac{3}{4}$ -in. rd. iron
by $\frac{3}{4}$ -in. rd. iron | | |
| No. 3 $\frac{3}{8}$ -in. pipe by
$\frac{3}{4}$ -in. rd. iron | | |
| No. 4 $\frac{1}{2}$ -in. pipe by
$\frac{3}{4}$ -in. rd. iron | | |
| No. 5 $\frac{5}{8}$ -in. sq. iron
by $\frac{3}{4}$ -in. rd. iron | | |

HOOKS FOR WORM GEARS

Furnished in Aluminized or Galvanized Malleable Iron or Solid Bronze



No. 0 and 1
Combination
Coupling
and Hook

No. 2 Hook

No. 3
Universal Joint
Hook

All Worm Gears ordered to be supplied with hooks, will be fitted with the No. 1 Hook, unless otherwise specified.

	Alum.	Per Hundred Galv.	Bronze
No. 0 Hooks will slip over $\frac{5}{8}$ -inch shaft....			
No. 1 Hooks will slip over $\frac{3}{4}$ -inch shaft....			
No. 2 Hooks will slip into $\frac{3}{4}$ -inch shaft coupling			
No. 3 Universal Joint Hooks will slip over $\frac{3}{4}$ -in. shaft....			

Any of the following worm gears are self-locking and can be used with hook attachment.

Worm Gears Nos. 180, 185, 187, 230, 233, 234, 236, 250, 270, 252, 272, 254, 258, 274, 278, 354, 2300, 2333, and the bronze gears 100, 130, 134, 136, 140, 154.



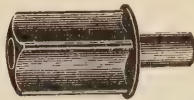
EYES FOR WINDING SHAFT

Finished in Aluminized,
Galvanized Iron
or Solid Bronze

	Slips over	Per Hundred Alum Galv. Bronze
No. 1 $\frac{1}{2}$ -in. iron		
No. 2 $\frac{5}{8}$ -in. iron		
No. 3 $\frac{3}{8}$ -in. pipe		
No. 4 $\frac{3}{4}$ -in. iron		

GUDGEONS OR PINION ENDS

Black Only



For Pipe
Inside Diameter

	Each
With Pin	Without Pin

- For 1 -inch pipe
- For 1 1/4-inch pipe
- For 1 1/2-inch pipe
- For 2 -inch pipe

GUDGEONS FOR TUBING

	Each
With Pin	Without Pin

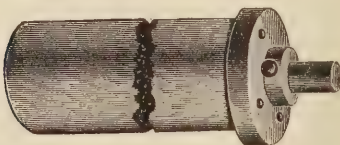
- For 1 29/64-in.I.D. or 1 5/8-in.O.D. Tube
- For 1 40/64-in.I.D. or 1 7/8-in.O.D. Tube
- For 1 45/64-in.I.D. or 1 9/10-in. O. D. Tube
- For 1 47/64-in.I.D. or 2 -in.O.D. Tube
- For 2 1/64-in.I.D. or 2 1/4-in.O.D. Tube
- For 2 10/64-in.I.D. or 2 3/8-in.O.D. Tube
- For 2 15/64-in.I.D. or 2 1/2-in.O.D. Tube
- For 2 50/64-in.I.D. or 3 -in.O.D. Tube

For Wood Roller
Outside Diameter

	Each
With Pin	Without Pin

- For 3 -inch wood
- For 3 1/2-inch wood

WOOD PLUGS



Gudgeons are equipped with 3-inch Wood Plug designed to fit 3-inch tin leader.

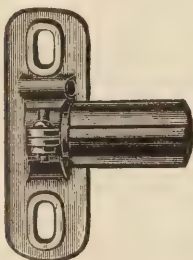
Any of our Worm Gears and Gear Ends can be equipped with wood plugs if so specified.

ATTENTION

Alemite Grease Cups can be applied to all styles of worm gears if so specified.

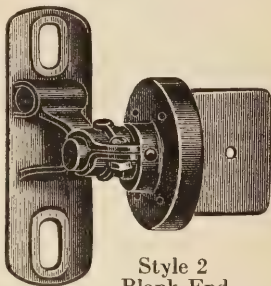
BLANK ENDS**With Gudgeons**

Finished in Aluminized or Galvanized Iron
Any Size Pipe or Wood Gudgeon can be used
on these Blank Ends



Style 1—Blank End
Projection 3 inches

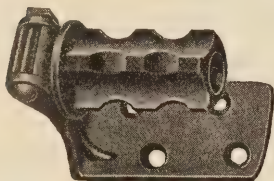
To be used with
 Styles 190, 192,
 250, 252, 270, 272
 Worm Gears, and
 any gear having a
 3-inch projection.



Style 2
Blank End

Projection 3½ inches

To be used with Styles
 185, 187, 194, 254, 274
 Worm Gears, Style 147
 Gear End and any gears
 having a 3½-inch projec-
 tion.

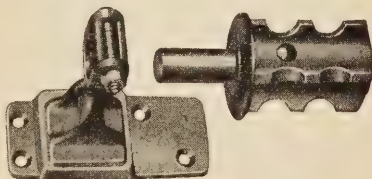


Style 4—Blank End
Projection
3 inches

To be used with
 Styles 230 and 2300
 Worm Gears.

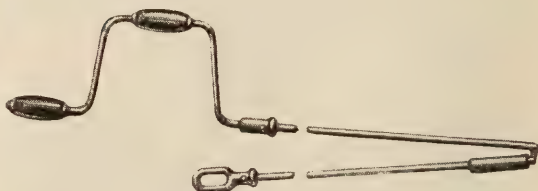
Style 3—Blank End
 is similar except that it has a 3½-inch projection.
 To be used with Styles 233 and 2333 Worm Gears.

Style 5
Blank End
Projection
3½ inches
 To be used
 with Styles
 198, 258 and
 278 Worm
 Gears.



COLLAPSIBLE WINDING BRACE

Galvanized



Brace is complete with eye. Will slip over any of hooks attached to Astrup Worm Gears.

Furnished in following lengths:

Each

6 foot overall.....

7 foot overall.....

8 foot overall.....

Longer lengths can be made to order.

BRACES FOR WINDING SHAFT

Galvanized



Furnished in galvanized steel, with hardwood center. For use in connection with worm gears with hook and eye construction. Will make a 12-inch sweep.

Each

No. 1 For $\frac{1}{2}$ -inch iron.....

No. 2 For $\frac{5}{8}$ -inch iron.....

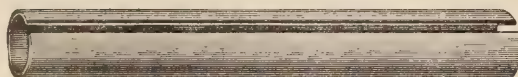
No. 3 For $\frac{3}{8}$ -inch pipe.....

COUPLINGS FOR AWNING ROLLERS**Malleable Iron****Length 12 Inches**

These couplings are made of Malleable Iron and are used to join together sections of pipe and tube.

Sizes listed are inside diameters.

	Each		Each
		1 29/64-in. tube..	
1 1/4-in. pipe .		1 45/64-in. tube..	
1 1/2-in. pipe .		2 10/64-in. tube..	
2 -in. pipe .		2 15/64-in. tube..	

COUPLINGS FOR AWNING ROLLERS**Split Steel Tubing****Length 12 Inches**

Couplings are made of steel and will fit inside of pipe rollers to join long lengths of rollers together.

Sizes listed are inside diameters.

	Each
1 1/4-inch pipe.....	
1 1/2-inch pipe.....	
2-inch pipe.....	

OPENING AND CLOSING LIDS FOR RECESS BOXES

Many architects and storefront fabricators are designing and building recess and concealed awning boxes to accommodate the awning cover and mechanism.

With this construction, when Astrup Tensolok (lateral type) Arms are used in the awning construction, the entire assembly, including the awning cover and mechanism disappears within the recess box when the awning is rolled up. This provides protection from the elements and conceals any awning mechanism that may have a tendency to detract from the architectural beauty of the storefront.

Many recess awning boxes are now being fitted with lids of the same metal as the storefront. This lid covers the opening of the recess box. This lid is lowered when the awning is rolled up, and completely conceals the awning and the mechanism, leaving no indication of the presence of an awning.

This is architecture of the modern type in storefront construction, and requires highly developed, carefully machined, and properly engineered awning and lid mechanisms.

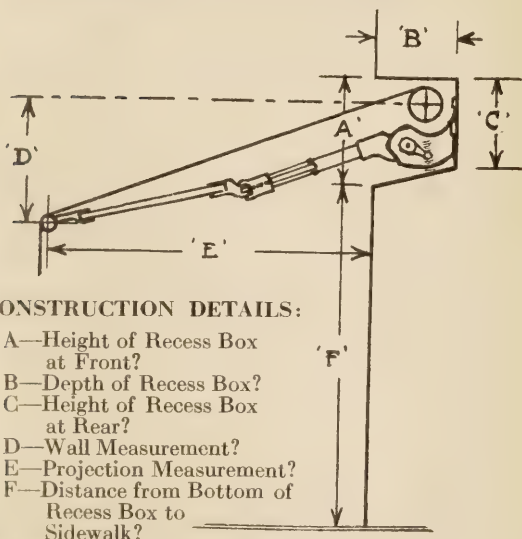
Astrup is proud to offer you their contribution to this modern type of construction, and the following pages illustrate and explain in detail the many types of lid opening and closing devices we have developed.

It is possible to install awnings and awning mechanisms in recess boxes quickly and efficiently provided properly designed units are used to operate the awning as well as the lid. Astrup Awning Mechanisms are recommended to obtain the best results.

Blue Print details of any style may be had upon request.

NOTE: Concealed Awning Enclosure Panels, or Lids, preferably should be made of extruded aluminum panels, or of a similar lightweight metal that does not exceed $2\frac{1}{2}$ lbs. per foot in weight. Whenever lids have a total weight of more than 40 lbs., or exceed a length of 20 feet, Lid Equalizer Springs should be installed on lid shaft to aid in raising the lid, and to equalize weight of lid on operating gear. Ceiling of recess box must be level at all points if efficient installation is to be made. It is recommended whenever possible that lids be reinforced to assure rigidity and prevent deflection.

DATA REQUIRED TO PROPERLY FILL ORDERS FOR RECESS BOX MECHANISM



CONSTRUCTION DETAILS:

- A—Height of Recess Box at Front?
- B—Depth of Recess Box?
- C—Height of Recess Box at Rear?
- D—Wall Measurement?
- E—Projection Measurement?
- F—Distance from Bottom of Recess Box to Sidewalk?

IN ADDITION TO THE ABOVE, ADVISE:

Recess Box

- G—Exact Length of Recess Box?
- H—If Recess Box extends past Window Line, advise how much on each side of window?
- I—Will Recess Box be Open Face construction, or will it be equipped with a Lid?
- J—If it has a Lid, is it Hinged or Pivoted Type?

Worm Gear

- K—What style of Worm Gear is to be used?
- L—What finish is required on Worm Gear?
- M—Is Worm Gear to be mounted on right or left side of Recess Box?
- N—Will Worm Gear be operated by a Hook or by a Control Gear?

Blank End

- O—What style of Blank End is to be used?
- P—What finish is required on Blank End?

Awning Arms

- Q—Exact length of Arms to be used?
- R—Finish required on Arms?
- S—Size of Front Bar Clamp to be used?

Roller

- T—Diameter of Tubing to be used in roller?
- U—Will Tubing be Black or Galvanized?
- V—Will Tubing be drilled for attachment of Cover with Nails?

LID OPENING AND CLOSING DEVICE DESCRIPTION

For Hinged Lids or Pivoted Lids on Concealed or Recess Box Awnings

The **Lid Operating Gear** is compact, powerful and easy to operate. It can be furnished for either right or left mounting. Please specify type mounting when ordering.

The **Shaft Supports** uphold the round shaft that runs length of recess box. Shaft Supports should be placed about 18 inches in from each end of recess box, and one Shaft Support should be placed every 36 inches of intervening length. Shaft Supports with Plain Bearings are supplied for $\frac{3}{4}$ -inch and 1-inch round shafts. Also Shaft Supports with self-lubricating Bronze Bearings can be supplied for 1-inch round shafts. When equipped with Bronze Bearing Shaft Supports, operation of lid mechanism is easier and smoother.

The **Shaft Guide** supports worm shaft of Lid Operating Gear, and prevents this worm shaft from shifting or slipping.

The **Lid Equalizer Springs** are recommended for smoothness and ease of lid operation. They also equalize weight of lid on Lid Operating Gear. It is recommended that on lightweight aluminum lids, at least one Lid Equalizer Spring be installed to eliminate chatter when raising and lowering lid. On lids weighing 3 lbs. per lineal foot one Lid Equalizer Spring should be placed every 6 feet across length of recess box. On lids weighing 4 to 6 lbs. per lineal foot, one Lid Equalizer Spring should be placed every 3 feet across length of recess box.

LID OPENING AND CLOSING DEVICE DESCRIPTION

For Hinged Lids or Pivoted Lids on Concealed or Recess Box Awnings

The **Lever Arms** and **Saddle Shoes** are used only on Hinged Type Lids, and operate as a unit. **Lever Arms** project and lower the lid. Extra smooth operation is obtained through fitting of **Lever Arms** with bronze rollers. **Lever Arms** securely lock lid in open or closed position, preventing damage to lid or mechanism by wind. **Lever Arms** should be spaced and placed same as **Shaft Supports**. The **Saddle Shoe** is used as a locking device for **Lever Arm**. It should be placed on back of lid, directly opposite and below **Lever Arm**.

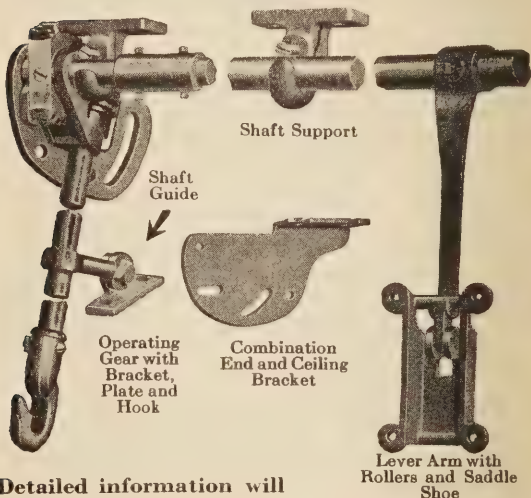
The **Lid Pivoting Member** is used only on Pivoted Type Lids, and lid fastening is made to these parts quickly and easily. **Lid Pivoting Members** should be placed same as **Shaft Supports**.

The **Combination End and Ceiling Bracket** provides a strong, rigid means of attaching the **Lid Operating Gear**, and assures permanent installation as well as positive location of lid gear shaft. It permits the lid gear to be fastened either to the ceiling or the end of recess box. It has an adjustable feature, permitting the operating shaft of lid gear to be set and locked at any needed angle. The use of this bracket is recommended on all installations.

The entire mechanism is simple to install and positive in operation.

HINGED TYPE LID OPENING AND CLOSING DEVICE

For Hinged Lids on Concealed or
Recess Box Awnings
Furnished in Cadmium Plated Malleable
Iron or in Solid Bronze
Pat. Applied For



Operating
Gear with
Bracket,
Plate and
Hook

Shaft
Guide

Combination
End and Ceiling
Bracket

Shaft Support

Lever Arm with
Rollers and Saddle
Shoe

Cadmium
Plated
Each

Solid
Bronze
Each

Detailed information will
be found on preceding
pages.

***Lid Operating Gear, with shaft bracket,
End Plate and Hook:**

No. 10 For $\frac{3}{4}$ " round lid shaft

No. 10-1 For 1" round lid shaft

Combination End and Ceiling Bracket,
for fastening Lid Operating Gear. Can be
furnished for right or left hand mounting.
Please specify when ordering

No. 10-D Shaft Guide Only

Cover Plate Operating Unit, consisting of
one Lever Arm, one Saddle Shoe and one
Shaft Support, with extruded screws for
fastening Saddle Shoes to lid:

No. 10 For $\frac{3}{4}$ " shaft, with Plain Bearing
Shaft Support

No. 10-1 For 1" shaft, with Plain Bear-
ing Shaft Support

No. 10-1B For 1" shaft, with Bronze
Bearing Shaft Support

Equalizer Spring Unit

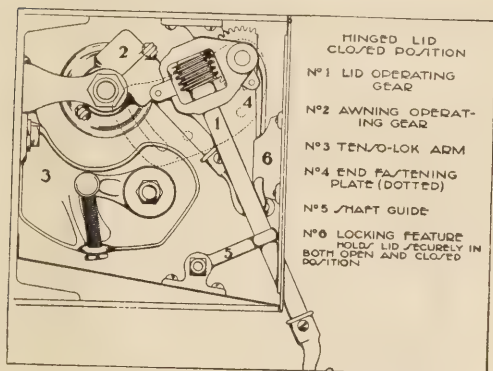
$\frac{3}{4}$ " Round Shaft, per foot

1" Round Shaft, per foot

***Unless otherwise specified, the Lid Gear will
be furnished with hook and for right hand
mounting, although it can be equipped with
coupling for operation with No. 40 Gear Box
or No. 42 Control Gear.**

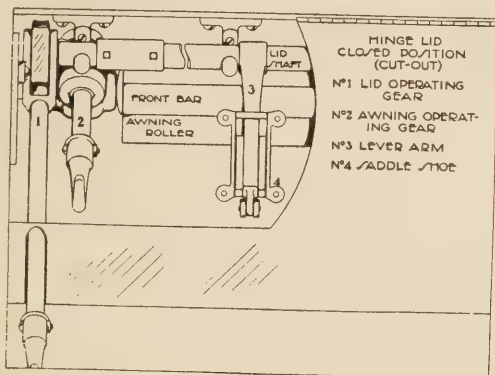
WRITE FOR DETAILED BOOK

DETAIL CONSTRUCTION OF THE ASTRUP HINGED TYPE LID OPENING AND CLOSING DEVICE



End View

Indicating proper position of related parts.



Face View

Indicating proper position of related parts.

Only the Hinged Type Lid Mechanism is
furnished by Astrup

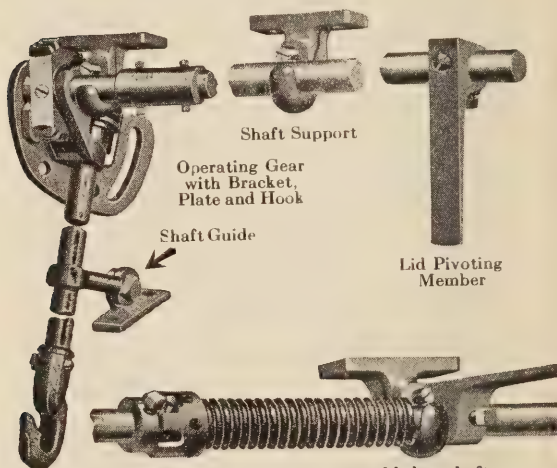
Lids are furnished by store front contractor.

Detailed Blue Prints sent upon request, which
also indicate size of recess box required for in-
stallation.

PIVOTED TYPE LID OPENING AND CLOSING DEVICE

For Pivoted Lids on Concealed or Recess Box Awnings

Furnished in Cadmium Plated Malleable Iron
or in Solid Bronze
Pat. Applied For



Illustrating Lid Equalizer Spring assembled on shaft with Lid Pivoting Member.

Detailed information will be found on preceding pages.

Cadmium
Plated
Each

Solid
Bronze
Each

*Lid Operating Gear, with Shaft Bracket, End Plate and Hook:

No. 11 For $\frac{3}{4}$ " round lid shaft

No. 11-1 For 1" round lid shaft.....

Combination End and Ceiling Bracket, for fastening Lid Operating Gear. Can be furnished for right or left hand mounting. Please specify when ordering.....

No. 11-D Shaft Guide only

Cover Plate Operating Unit, consisting of one Lid Pivoting Member and one Shaft Support:

No. 11 For $\frac{3}{4}$ " shaft, with Plain Bearing Shaft Support.....

No. 11-1 For 1" shaft, with Plain Bearing Shaft Support.....

No. 11-1B For 1" shaft, with Bronze Bearing Shaft Support.....

Equalizer Spring Unit.....

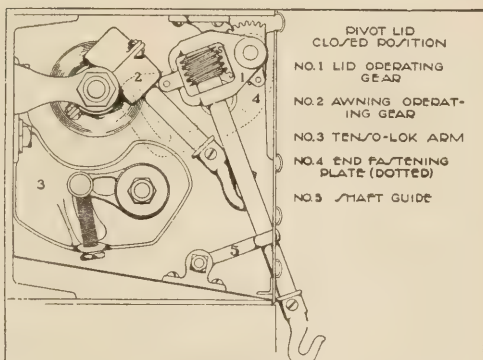
$\frac{3}{4}$ " Round Shaft, per foot.....

1" Round Shaft, per foot.....

*Unless otherwise specified, the Lid Gear will be furnished with hook and for right hand mounting, although it can be equipped with coupling for operation with No. 40 Gear Box or No. 42 Control Gear.

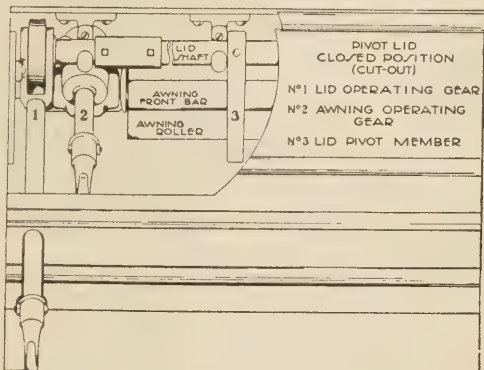
WRITE FOR DETAILED BOOK

DETAIL CONSTRUCTION OF THE ASTRUP PIVOTED LID OPENING AND CLOSING DEVICE



End View

Indicating proper position of related parts.



Face View

Indicating proper position of related parts.

**Only the Pivoted Lid Mechanism is furnished
by Astrup**
**Lids and Weatherstrips are furnished by store
front contractors**

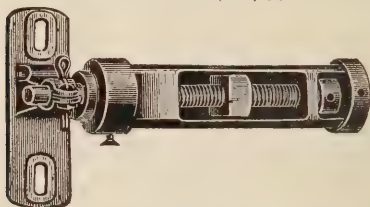
Detailed Blue Prints sent upon request, which
also indicate size of recess box required for instal-
lation.

AWNING CHECK

For Gear Ends and Worm Gears
Furnished in Aluminized or Galvanized Iron

Patented

Patent No. 1,678,790



Awning Check controls the distance that awning can be unrolled, and prevents canvas being rolled up on underside of roller with consequent cutting of cloth.

This check will be furnished with a patented malleable iron body. Enclosed will be a solid brass stud and nut to prevent corrosion. This control will operate on thirty-two (32) turns of roller.

Made for the following sizes of Awning Rollers: 1½-inch, 2-inch pipe, or 1-9/10-inch and 2¾-inch tube, taking the place of a blank end gudgeon and bracket.

Instructions for adjusting are attached to each check.

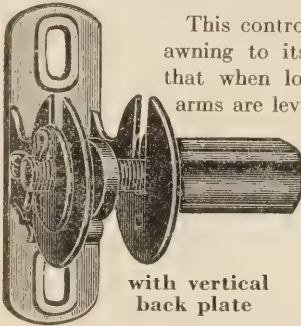
Each
Alum. Galv.

- | | | |
|-------|--|--|
| No. 1 | For 1½-inch pipe, 3-inch projection Blank End Bracket..... | |
| No. 2 | For 1½-inch pipe, 3½-inch projection Blank End Bracket..... | |
| No. 3 | For 2-inch pipe, 3-inch projection Blank End Bracket..... | |
| No. 4 | For 2-inch pipe, 3½-inch projection Blank End Bracket..... | |
| No. 5 | For 1-9/10-inch tube, 3-inch projection Blank End Bracket..... | |
| No. 6 | For 1-9/10-inch tube, 3½-inch projection Blank End Bracket.... | |
| No. 7 | For 2¾-inch tube, 3 inch projection Blank End Bracket..... | |
| No. 8 | For 2¾-inch tube, 3½-inch projection Blank End Bracket..... | |

ROLLER AWNING CONTROL

Patented
Patent No. 1,778,404

Finished in Aluminized or Galvanized Iron



with vertical
back plate

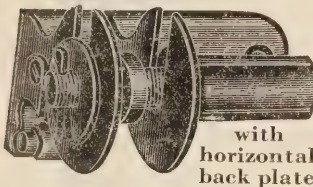
This control will adjust a roller awning to its proper position so that when lowered the extension arms are level. It will always stop awning at point desired. It also serves as a blank end and can be fitted for any size pipe, tube, or wood gudgeon.

Another feature is if two or more awnings are on the same store front or building, they can be so adjusted that they will always be on the same level when lowered.

Alum. Galv.

No. 10 3-inch projection Vertical
Back Plate.....

No. 14 3½-inch projection Vertical
Back Plate.....



with
horizontal
back plate

For use on narrow casements, prisms, and where roller operates between projection columns. Made in right and left assembly.

Please specify when ordering the assembly wanted.

Alum. Galv.

No. 20-R 3-inch projection Right
Horizontal Back Plate.....

No. 20-L 3-inch projection Left
Horizontal Back Plate.....

No. 24-R 3½-inch projection Right
Horizontal Back Plate.....

No. 24-L 3½-inch projection Left
Horizontal Back Plate.....

ATTENTION: To adjust, leave the bolt out until awning is in proper position, with arms level and the cloth in the deck and wings at same tension; turn the brass nut or arm till it tightens against side of bracket. (Usually this is outside wall, with washer and cotter pin on outside of bracket for strength). Insert bolt through hole in bracket, passing through hole in brass nut or arm, screwing into hole on opposite side of bracket and adjustment is made.

ROLLER CURTAIN FIXTURES

SPOOL ROLLERS

Made of Malleable Iron

Finished in Aluminized or Galvanized

Fits 2½-inch Wood
Roller



Style 20



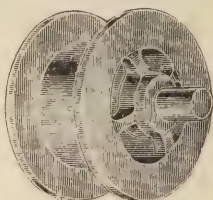
Style 21
Projection 2⅞ inches



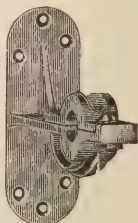
Style 22

They are designed for practical use on roller curtains and porch awnings.

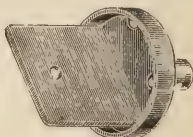
Fits 3-inch Wood
Roller



Style 25



Style 26
Projection 3½ inches



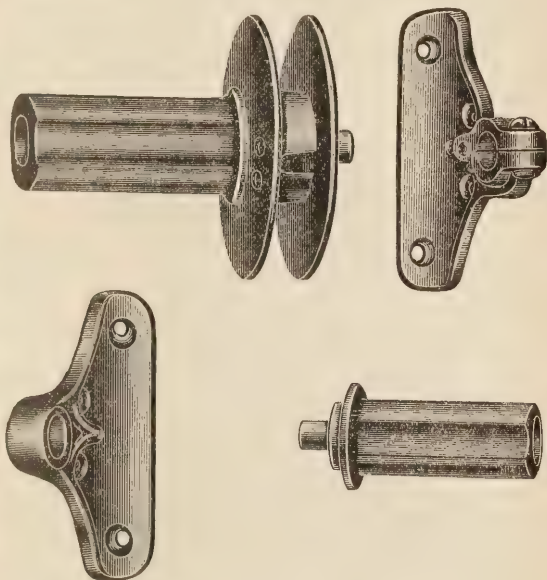
Style 27

Fixtures of this size can be used on roller curtains, porch and store awnings.

ROLLER CURTAIN FIXTURES

SPOOL ROLLERS

Finished in Aluminized or Galvanized Iron



The spool roller fixtures are designed for use on $\frac{3}{4}$ -inch, 1-inch or $1\frac{1}{4}$ -inch pipe rollers. These fixtures are small in design and can be used on roller curtains and porch awnings.

Each
Alum. Galv.

No. 31 $\frac{3}{4}$ -in. pipe Spool Roller only

No. 32 1 -in. pipe Spool Roller only

No. 33 $1\frac{1}{4}$ -in. pipe Spool Roller only

No. 36 Spool Roller Bracket only . . .

Projection $2\frac{1}{4}$ -inches

No. 37 Spool Roller Blank End

Bracket only

Projection $2\frac{1}{4}$ -inches

No. 38 $\frac{3}{4}$ -in. pipe Gudgeon for

Blank End

No. 39 1 -in. pipe Gudgeon for

Blank End

No. 40 $1\frac{1}{4}$ -in. pipe Gudgeon for

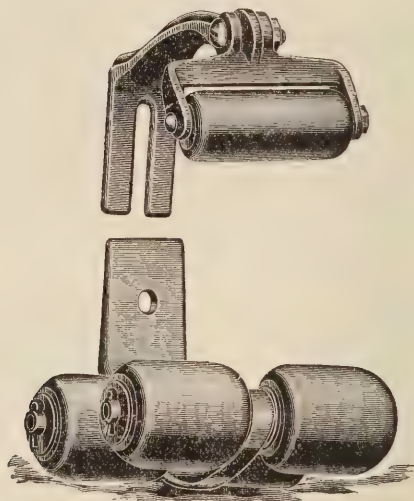
Blank End

In ordering please specify size pipe spool rollers must fit.

ROCKING CENTER SUPPORT FOR WOOD ROLLERS

2-inch and larger Pipe
also $2\frac{3}{8}$ -inch Tube

Finished in Aluminized or Galvanized
Malleable Iron



Style No. 61

This Support is intended for use with a Wood Roller, 2-inch and larger pipe, also $2\frac{3}{8}$ -inch Tube.

It is made of the best Malleable Iron and the self-alignment features are also embodied in its construction. Its large circumference makes it adjustable for use on awnings with a long pitch, and in such cases the upper part of the Support may be raised to accommodate the large size roll.

Style 661 Sleeve Bearing

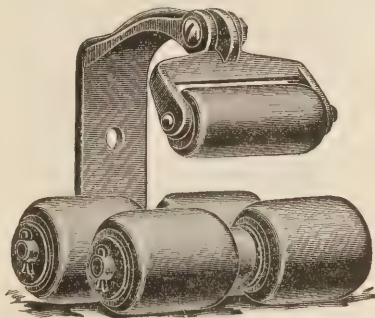
When Style 61 Center Support is furnished with brass sleeve bearing in wood roller, it is known as Style 661. This equipment allows positive and smooth operation of roller and eliminates friction.

Use above with $3\frac{1}{2}$ -inch projection Worm Gears and awnings with "long wall."

ROCKING CENTER SUPPORT

For $1\frac{1}{4}$ -inch or $1\frac{1}{2}$ -inch Pipe,
 $1\frac{5}{8}$ -inch and $1\frac{9}{10}$ -inch Tube

Finished in Aluminized or Galvanized
Malleable Iron



Style No. 62

This Support is intended for use with $1\frac{1}{4}$ -inch, $1\frac{1}{2}$ -inch Pipe, or $1\frac{5}{8}$ -inch, and $1\frac{9}{10}$ -inch Tube Roller Awnings. It can be fastened on to a 6-inch plank, the Rollers are made of the best grade wood suitable for the purpose and the roller pins and holes are so arranged that the Support has a self-adjustable alignment so it will not cut the canvas. It is made in two pieces and when putting up the roller remove the upper wood roller from the holding bracket to place the pipe, tube or wood in its proper position.

Style 662 Sleeve Bearing

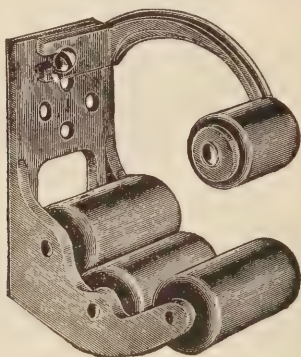
When Style 62 Center Support is furnished with brass sleeve bearing in wood roller, it is known as Style 662. This equipment allows positive and smooth operation of roller and eliminates friction.

Use above with 3-inch projection Worm Gears and awnings with "medium wall."

LARGE CENTER SUPPORT

For all size Wood Rollers, 2-inch and larger
Pipe; also 2 $\frac{3}{8}$ -inch Tube

Finished in Aluminized or Galvanized Iron



Style 64

This style center support is large and roomy, it is adapted to awnings with a long pitch.

Each hole for the bolts for rollers is carefully laid out before drilling to insure perfection. Rollers are made of hard maple.

Too much care can not be taken in lining up center supports and end journals for securing the best results. Many awnings are cut, because supports are not properly lined or bolted square onto the building.

Style 664 Sleeve Bearing

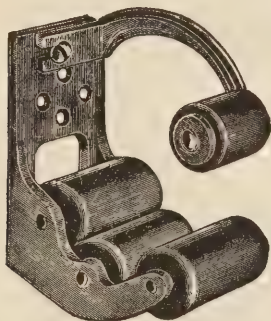
When Style 64 Center Support is furnished with brass sleeve bearing in wood roller, it is known as Style 664. This equipment allows positive and smooth operation of roller and eliminates friction.

Use above with 3 $\frac{1}{2}$ -inch projection Worm Gears and awnings with "short wall."

SMALL CENTER SUPPORT

For 1, 1 $\frac{1}{4}$, and 1 $\frac{1}{2}$ -inch Pipe; 1 $\frac{5}{8}$ -inch, and
1-9/10-inch Tube

Finished in Aluminized or Galvanized Iron



Style 65

This support is made just like our Style 64 support, but in a smaller design. It is adapted for awnings with an ordinary projection and is in demand for use in small and confined places.

Style 665 Sleeve Bearing

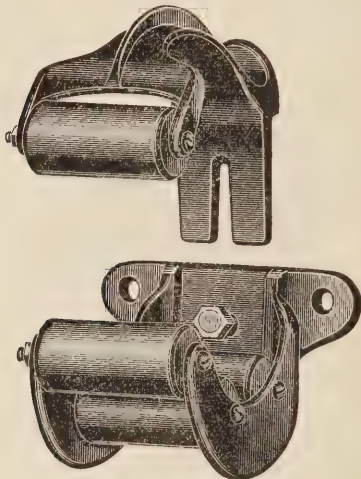
When Style 65 Center Support is furnished with brass sleeve bearing in wood roller, it is known as Style 665. This equipment allows positive and smooth operation of roller and eliminates friction.

Use above with 3-inch projection Worm Gears and awnings with "short wall."

LARGE CENTER SUPPORT

For all sizes wood roller, 2-inch and larger
Pipe, also 2 $\frac{3}{8}$ -inch Tube

Finished in Aluminized or Galvanized Iron



Style 60

This style center support is large and roomy.

Each hole for the bolts for rollers is carefully laid out before drilling to insure perfection. Rollers are made large and of hard maple, and are well soaked in linseed oil and the supports are giving good satisfaction to the trade.

Too much care can not be taken in lining up center supports and end journals for securing the best results. Many awnings are cut, because supports are not properly lined or bolted square onto the building.

Style 660 Sleeve Bearing

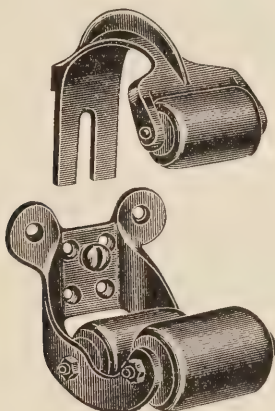
When Style 60 Center Support is furnished with brass sleeve bearing in wood roller, it is known as Style 660. This equipment allows positive and smooth operation of roller and eliminates friction.

Use above with 3 $\frac{1}{2}$ -inch projection Worm Gears and awnings with "short wall."

SMALL CENTER SUPPORT

For 1, 1 $\frac{1}{4}$, and 1 $\frac{1}{2}$ -inch Pipe; also 1 $\frac{5}{8}$ -inch,
and 1-9/10-inch Tube

Finished in Aluminized or Galvanized Iron



Style 66

Intended for use on recess box front and where small support is required.

Plates are furnished so that supports can be used on brick or iron columns.

Top section can be adjusted 2 inches.

Back Plate can be installed on wood or brick with two lag screws—or on iron with flat head machine screws—the heads of which are concealed when top section is in place.

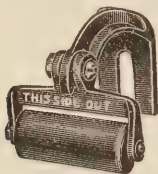
Style 666 Sleeve Bearing

When Style 66 Center Support is furnished with brass sleeve bearing in wood roller, it is known as Style 666. This equipment allows positive and smooth operation of roller and eliminates friction.

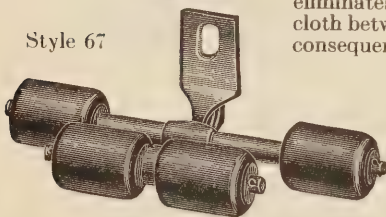
Use above with 3-inch projection Worm Gears and awnings with “medium wall.”

SPREAD ROLLER CENTER SUPPORTS

Finished in Aluminized or Galvanized Iron



Style 67



For 2-inch Pipe,
2 $\frac{3}{8}$ -inch Tube,
and Wood Rollers

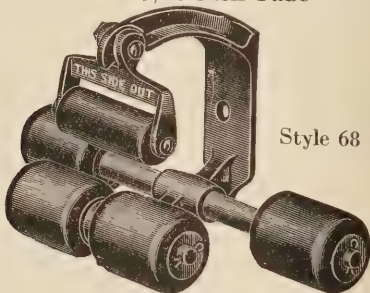
The back rollers being staggered or not in line with front rollers, eliminates pinching of cloth between rolls and consequent wear.

Style 667 Sleeve Bearing

When Style 67 Center Support is furnished with brass sleeve bearing in wood roller it is known as Style 667. This equipment allows positive and smooth operation of roller and eliminates friction.

Use above with 3 $\frac{1}{2}$ -inch projection Worm Gears and awnings with "long wall."

For 1 $\frac{1}{4}$ -inch and 1 $\frac{1}{2}$ -inch Pipe; 1 $\frac{5}{8}$ -inch, and 1-9/10-inch Tube



Style 68

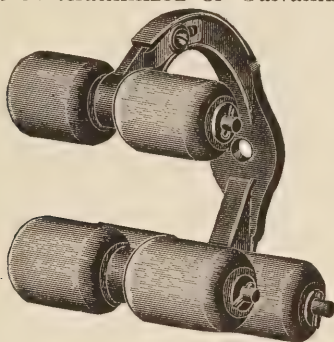
Style 668 Sleeve Bearing

When Style 68 Center Support is furnished with brass sleeve bearing in wood roller, it is known as Style 668. This equipment allows positive and smooth operation of roller and eliminates friction.

Use above with 3-inch projection Worm Gears and awnings with "long wall."

ROCKING CENTER SUPPORT

for Wood Rollers, 2-inch and larger Pipe,
also 2 $\frac{3}{8}$ -inch Tube
Finished in Aluminized or Galvanized Iron



Style 210

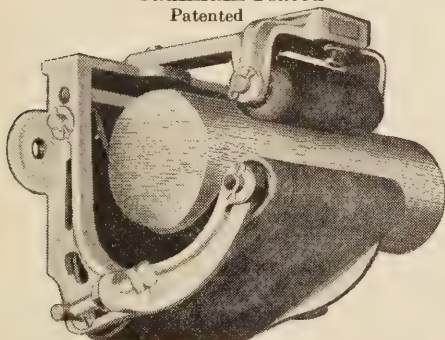
This center support has a 5-inch back plate so it can be fastened on a plank. It is large and roomy for awnings with a long pitch, and the rollers are made of seasoned hard maple.

Use above with 3 $\frac{1}{2}$ -inch projection Worm Gears and awnings with "medium wall."

ANTON ROLLER CRADLE

Cadmium Plated

Patented



This Roller Cradle operates on a principle entirely different in the field of center supports. The roller and cloth do not come in contact with the supporting rollers, but are suspended in a cradle of rubber-impregnated belt fabric.

It eliminates wrinkling and rapid cutting of awning cloth. It is adjustable for large or small rollers and does not have to be removed when roller is taken down.

Each

Roller Cradle.....

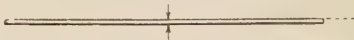
ASTRUP IMPROVED AWNING ROLLERS

Today, more than ever, awning rollers must be constructed to eliminate all sag at the center.

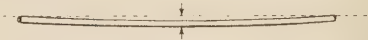
A sagging roller will cause a "whipping" action while the roller is being operated. This "whipping" will quickly result in unsatisfactory performance of the entire awning installation, and will shorten its life tremendously. Undue wear to all moving parts, loosening of bolts and screws, and distortion to members not built to take such strains, are results directly traceable to sagging awning rollers.

Awning rollers free of sag, can best be fabricated from Astrup Steel Tubing. It is rigid, but light, and is rolled specially for use in awning rollers.

Comparative Average Rigidity of Astrup Steel Tubing, Regular Steel Pipe and Wood Rollers



Astrup Steel Tubing is rigid and exceptionally strong, but light in weight. It will span 20 feet without sagging.



Regular Steel Pipe will sag about $1\frac{1}{4}$ -inches at the center of a 20-foot roller, upon installation. If permitted to remain upon building without a center support, this sag will increase to as much as $2\frac{1}{2}$ inches.



Wood Rollers will sag about 2 inches at the center of a 20-foot roller, upon installation. If permitted to remain upon the building without a center support, this sag will increase to as much as 4 inches.

Even with these superior features, Astrup Steel Tubing is inexpensive, and is easy to install.

NAILS FOR TUBING Hot Galvanized



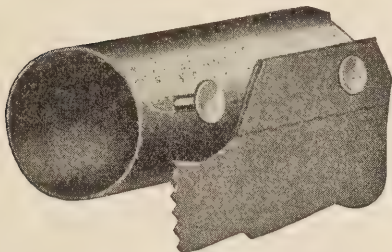
These nails are used in Astrup Steel Tubing (when drilled), to attach the awning cover to the roller. The nails have large heads and will hold the awning cover securely in position. This is a modern method of attaching awning covers as it provides a permanent, yet speedy, installation. There are approximately 315 nails to each pound.

Per lb.

$\frac{3}{4}$ " length Hot Galvanized Nails

ASTRUP STEEL TUBING

For Awning Rollers
Black and Galvanized



In most instances, Astrup steel tubing will be found more practical than either pipe or wood rollers.

It makes a stronger, more rigid construction for it is rolled specially for awning rollers. It will span awning rollers 20 feet in length without sagging, and eliminates the use of a center support.

It is cheaper than pipe.

It is light—handles easily.

Furnished only in 20 foot lengths.

Outside Diameter	Inside Diameter	Black Weight Per Foot	Per Hundred Feet	
			Black	Hot Galv.
1-5/8"	1-29/64"	1½ lbs.		
1-9/10"	1-45/64"	1¾ lbs.		
2-3/8"	2-10/64"	2½ lbs.		

If so specified, any of the three above mentioned sizes of tubing can be supplied with one-eighth ($\frac{1}{8}$ ") inch holes drilled every nine (9") inches apart, or any other distance specified, so that awning cover can be attached to tube roller, by means of large headed roofing nails driven solidly into these holes.

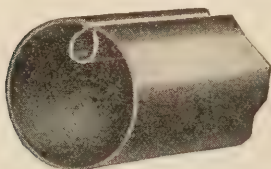
All Astrup Worm Gears can be furnished with gudgeons to fit these sizes of tubing. Malleable Couplings can also be supplied.

For Cutting Astrup Steel Tubing, we recommend the use of Lenox High Speed Steel Hack Saw Blades, or E. C. Atkins Silver Blade Hack Saw Blades. For Drilling, use high speed drills.

“YEATES” TUBULAR STEEL AWNING ROLLER

Patent No. 1834669

Black and Cadmium Plated



The rollers are made from tubing that has a groove running in a straight line along its entire length. The use of this tubing, eliminates the drilling of holes, as well as lacing, wrapping, painting or sewing to prevent slipping.

The awning cover requires no eyelets in the top. It is only necessary to sew Manila rope into a pocket along the head of the awning. The cover is fastened to the roller merely by slipping the roped head of the awning into the groove of the tubing.

Per Hundred Feet
Black Cad. Plated

Grooved Steel Tubing, 1 9/10-in.
outside diameter x 15-gauge.

Furnished only in 20-foot lengths.

All Astrup Worm Gears and Blank Ends can be furnished with gudgeons to fit this Grooved Tubing.

GUDGEONS FOR GROOVED TUBING

These gudgeons are designed specially for use with Grooved Tubing, and any Astrup Worm Gear or Blank End can be equipped with them.

Each
With Pin Without Pin

No. 20-X Gudgeon for Grooved
Tubing.....

COUPLINGS FOR GROOVED TUBING

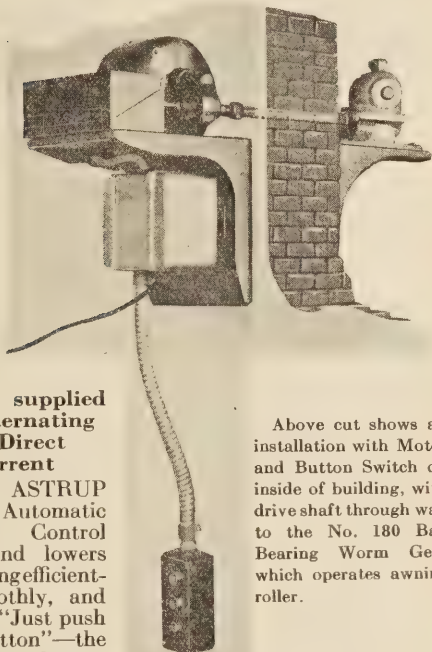
These couplings are made of tubular steel, and will fit inside of the Grooved Tubing, and are used to join sections to obtain any desired length of roller.

Each

No. 25-X Coupling for Grooved Tubing

ASTRUP ELECTRIC AUTOMATIC AWNING CONTROL

Patented
Reissue Patent No. 17587



**Can be supplied
for Alternating
or Direct
Current**

THE ASTRUP
Electric Automatic
Awning Control
raises and lowers
the awning efficiently,
smoothly, and
quietly. "Just push
the button"—the
control does the rest.

Above cut shows an
installation with Motor
and Button Switch on
inside of building, with
drive shaft through wall
to the No. 180 Ball
Bearing Worm Gear
which operates awning
roller.

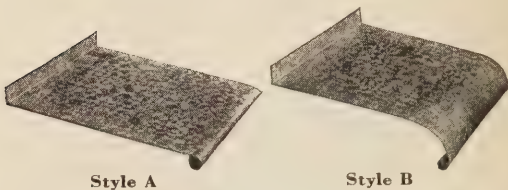
The standard complete unit consists of Style No. 180 Ball Bearing Worm Gear, Worm Gear Mounting Bracket, $\frac{1}{4}$ H.P. Motor, Motor Bracket, Operating and Limit Switches, 12-foot Extension Cord and 8-foot Conduit.

Moderately priced, it is the most efficient, simplest to operate, and economical control made. Cost of operation approximately one cent per day. We can construct the Electric Automatic Awning Control so that it can be installed on any type building construction.

All working parts are made of the finest materials obtainable for the purpose. Electric Controls can be furnished to operate awnings up to 100 feet in length, with an adjustment for wrapping 21 feet of canvas on a 2-inch pipe or $2\frac{3}{8}$ -inch tube roller.

Write for Circular and Prices

GALVANIZED AWNING HOODS



Both Styles A and B Awning Hoods are made of 28 gauge sheets, with a reinforcing bead.

Made in two styles A and B (see illustrations above) and in standard girths 12, 15, and 18 inches and supplied only in 10 feet stock lengths.

Awning Hoods offer that necessary protection when awnings are completely rolled or folded, so that dust, dirt, rain or snow does not lay on the awning. Awnings protected by Awning Hoods will stay clean longer and are an inexpensive investment for they will last for years. By suggesting the advantage of Awning Hoods, you are performing a necessary service and are building good will and still are selling an additional item to derive a profit.

28 Gauge Style A or B Galvanized Steel Awning Hoods—10 Ft. Lengths

Girth†	Finished Extension		250 ft. crate lots
	Style A	Style B	
12 inch...	9 inch...	7¼ inch...	
15 inch...	12 inch...	9½ inch ..	
18 inch...	15 inch...	12½ inch...	

NOTE: Furnished only in full crate lots.

In ordering specify style and girth wanted.

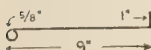
† For further information, see opposite page for detailed illustrations.

GALVANIZED AWNING HOODS

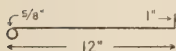
The illustrations shown below picture the finished extension sizes of 12, 15 and 18 inch girth awning hoods.

Style A Awning Hood

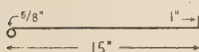
12'' Girth



15'' Girth

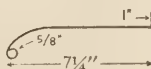


18'' Girth

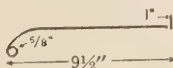


Style B Awning Hood

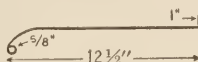
12'' Girth



15'' Girth

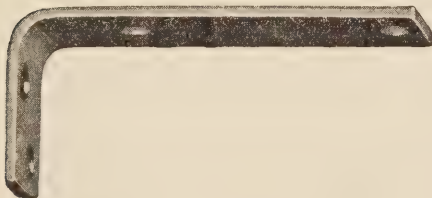


18'' Girth



BRACKETS FOR AWNING HOODS

Hot Galvanized



Made of $\frac{1}{4}$ -inch by 1-inch Wrought Steel. Drilled with holes necessary for fastening to building and attaching to awning hood.

Each

No. 1 For 12'' girth Hoods.....

No. 2 For 15'' and 18'' girth Hoods...

SPECIAL ORNAMENTAL AWNING ARMS AND FIXTURES MADE

Many buildings of the finer type have beautiful fronts made of bronze, duraluminum and other non-corrosive alloy metals.

These fronts are quite expensive, and naturally the architect who designed them insists that the awnings, and the awning operating parts be correspondingly attractive. In view of this, The Astrup Company is offering a service, whereby Ornamental Awning Arms, Hinges, Gears, and other hardware parts will be made in our own shop of the same metals that are used for the building front. We have highly specialized and experienced designers who can match the beading on the building front. This feature will enable the awning construction to be just as fine a piece of craftsmanship as any other part of the building construction.

Whenever you are asked to submit bids on special awning work, secure a blue print of the building front, together with the awning detail, and submit them to us. We will be glad to submit sketches of the awning operating parts and arms that will harmonize and blend with the building front.

Awning work of this class is profitable for you and if at any time we can offer our experience to you we should be happy to do so.

SECTION II

AWNING ARMS AND ACCESSORIES

Contents

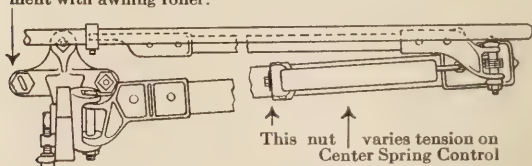
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Arms, Lateral.....	70
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ASTRUP TENSO-LOK ARM

Reg. U. S. Pat. Off.

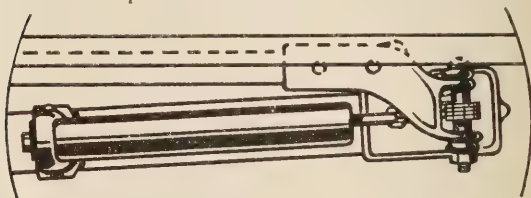
Tenso-lok Arms are now furnished only with center spring control. This center spring attachment holds the cloth taut when awning is extended. It also compels the arm to extend to its full projection. There is an equal tension on the spring regardless of the angle of the arm. The spring tension can be easily adjusted to meet particular requirements.

Hex Bushings permit arm to swing to proper position so arm members are always in alignment with awning roller.

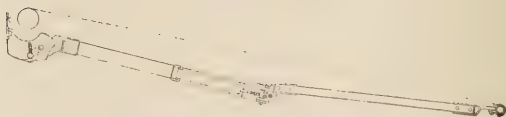


Folded position of Astrup Tenso-lok Arm with Center Spring Control

Center Spring Control is equipped with bronze chain to prevent corrosion. The spring is securely locked into position at all times.



Extended Position



Brackets require smallest space of any arm on the market.

Provides proper clearance between arm and awning cloth in all positions.

The Astrup Tenso-lok Arm is designed to permit ease of installation. It is very attractive in appearance. It combines all the necessary practical features that are in keeping with modern architecture.

Templates for locating holes on building for each style of Tenso-lok Arm will be sent with all arms.

Worm gears with 3½" projection recommended for use with all Tenso-lok Arms.

WRITE FOR DESCRIPTIVE BOOK

ASTRUP TENSO-LOK ARMS

Reg. U. S. Pat. Office

With Center Spring Control

Patent Nos. 1,842,402, 1,845,931, 1,915,529, 1,922,764,
2,038,045 and other patents applied for.Finished in Black Painted, Cadmium Plated
and Hot Galvanized

Lgth.	No. 30 Open	No. 31 Recess	No. 33 Open	No. 34 Recess
3'6"-4'			No. 33 and 34 Arms are not supplied in lengths rang- ing from 3'6" to 7' inclu- sive	
4'6"-5'	\$ 9.50	\$ 9.50		
5'6"-6'	\$10.00	\$10.00		
6'6"				
7'-7'6"			\$11.90	\$11.90
8'-8'6"	No. 30 and 31 Arms are not supplied in lengths rang- ing from 7' to 11' inclusive		\$12.50	\$12.50
9'			\$17.00	\$17.00
10'			\$19.00	\$19.00
11'			\$22.50	\$23.50

Black Painted Discount.....%

Cadmium Plated or Hot

Galvanized Discount.....%

See description on opposite page.

Astrup Tensolok Arms can also be finished in Chromium, Bronze, and Oxidized Copper Plate, to match color of building front, but no responsibility can be assumed for rustproof qualities.

Astrup Tensolok Arms can also be furnished in Solid Bronze and Stainless Steel.

Number of arms needed for all length awnings:

2 arms up to and including 22 ft. wide.

3 arms up to and including 28 ft. wide.

4 arms up to and including 40 ft. wide.

5 arms up to and including 52 ft. wide.

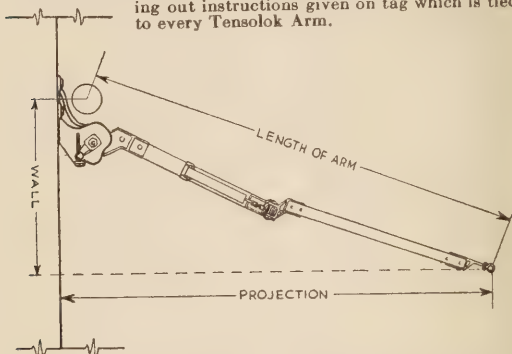
For awnings over 52 ft. wide, allow one arm for every 10 feet.

It is our recommendation that wherever possible an even number of arms be used for each awning. When odd number of arms are used, considerable care must be taken in adjusting tension spring, so that pressure from right and left sides is approximately the same.

WALL AND PROJECTION

Showing projection in relation to given wall. For convenience, only 6 inch variation in wall measurement is given.

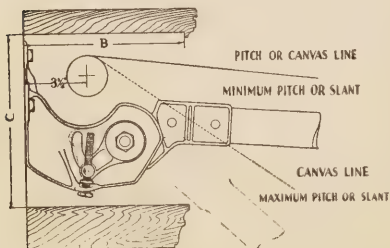
Any wall measurement between the shortest and longest listed on the various size Tensolok Arms, can be had by following out instructions given on tag which is tied to every Tensolok Arm.



These are approximate measurements obtainable on No. 30 Astrup Tensolok Arms.

3'6" ARM Wall Proj. 1'0"x3'8" 1'6"x3'6" 2'0"x3'4" 2'6"x3'0" 3'0"x2'6"	4'0" ARM Wall Proj. 1'0"x4'2" 1'6"x4'1" 2'0"x3'10" 2'6"x3'7" 3'0"x3'3" 3'6"x2'9"	4'6" ARM Wall Proj. 1'0"x4'8" 1'6"x4'7" 2'0"x4'5" 2'6"x4'2" 3'0"x3'10" 3'6"x3'5"	5'0" ARM Wall Proj. 1'0"x5'2" 1'6"x5'1" 2'0"x4'11" 2'6"x4'9" 3'0"x4'5" 3'6"x4'1" 4'0"x3'8"
Shipping wt. 17 lbs.	Shipping wt. 18 lbs.	Shipping wt. 19 lbs.	Shipping wt. 20 lbs.

5'6" ARM Wall Proj. 1'0"x5'8" 1'6"x5'7" 2'0"x5'5" 2'6"x5'3" 3'0"x5'0" 3'6"x4'9" 4'0"x4'3" 4'6"x3'9"	6'0" ARM Wall Proj. 1'6"x6'2" 2'0"x6'0" 2'6"x5'11" 3'0"x5'8" 3'6"x5'4" 4'0"x5'0" 4'6"x4'6" 5'0"x4'0"	6'6" ARM Wall Proj. 1'6"x6'7" 2'0"x6'6" 2'6"x6'4" 3'0"x6'2" 3'6"x5'11" 4'0"x5'7" 4'6"x5'2" 5'0"x4'9" 5'6"x4'2"
Shipping wt. 21 lbs.	Shipping wt. 22 lbs.	Shipping wt. 23 lbs.



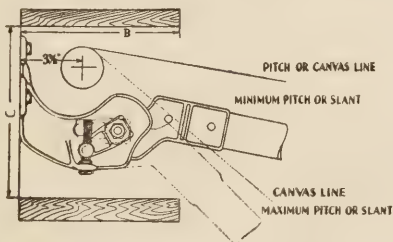
Illustrating No. 31 Tensolok Arm Bracket in recess box. Detailed Blue Print furnished on request, showing size boxes required for various walls and projections.

WALL AND PROJECTION

These are approximate measurements obtainable on No. 33 Astrup Tensolok Arms

7'0" ARM Wall Proj. 2'0"x6'11" 2'6"x6'9" 3'0"x6'7" 3'6"x6'5" 4'0"x6'1" 4'6"x5'9" 5'0"x5'4" 5'6"x4'10" 6'0"x4'2"	7'6" ARM Wall Proj. 2'6"x7'4" 3'0"x7'2" 3'6"x6'11" 4'0"x6'8" 4'6"x6'4" 5'0"x6'0" 5'6"x5'7" 6'0"x5'0" 6'6"x4'4"	8'0" ARM Wall Proj. 2'6"x7'10" 3'0"x7'8" 3'6"x7'6" 4'0"x7'3" 4'6"x7'0" 5'0"x6'8" 5'6"x6'3" 6'0"x5'9" 6'6"x5'3" 7'0"x4'7"	8'6" ARM Wall Proj. 2'6"x8'4" 3'0"x8'3" 3'6"x8'1" 4'0"x7'10" 4'6"x7'7" 5'0"x7'4" 5'6"x6'11" 6'0"x6'6" 6'6"x6'0" 7'0"x5'6" 7'6"x4'8"
Shipping wt. 32 lbs.	Shipping wt. 33 lbs.	Shipping wt. 35 lbs.	Shipping wt. 39 lbs.

9'0" ARM Wall Proj. 3'0"x8'9" 3'6"x8'8" 4'0"x8'5" 4'6"x8'2" 5'0"x7'9" 5'6"x7'7" 6'0"x7'3" 6'6"x6'9" 7'0"x6'4" 7'6"x5'8" 8'0"x4'11"	10'0" ARM Wall Proj. 3'6"x9'8" 4'0"x9'6" 4'6"x9'3" 5'0"x9'0" 5'6"x8'9" 6'0"x8'5" 6'6"x8'1" 7'0"x7'8" 7'6"x7'2" 8'0"x6'8" 8'6"x6'0" 9'0"x5'3"	11'0" ARM Wall Proj. 3'6"x10'8" 4'0"x10'7" 4'6"x10'4" 5'0"x10'2" 5'6"x 9'11" 6'0"x 9'7" 6'6"x 9'4" 7'0"x 9'0" 7'6"x 8'7" 8'0"x 8'2" 8'6"x 7'7" 9'0"x 7'1" 9'6"x 6'6"
Shipping wt. 46 lbs.	Shipping wt. 50 lbs.	Shipping wt. 52 lbs.



Illustrating No. 34 Tensolok Arm Bracket in recess box. Detailed Blue Print furnished on request, showing size boxes required for various walls and projections.



ASTRUP LATERAL ARM

With Bracket Adjusting Lug
Furnished in Black or Galvan-
ized Finish

Patented
Pat. No. 1,842,402

Manufactured by The Astrup
Company

For Open Transom Bar
Construction

List Prices

No. 8	3 ft. 6 in., 4 ft.	}	\$9.50
	4 ft. 6 in., 5 ft.		
No. 8	5 ft. 6 in., 6 ft.	}	10.00
	6 ft. 6 in.		
No. 8	7 ft.		11.90
No. 6	6 ft., 6 ft. 6 in.		11.30
No. 6	7 ft., 7 ft. 6 in.		11.90
No. 6	8 ft.		12.50

If No. 8 Arms are wanted longer
than listed use list price of No. 6.

Black Painted Discount%

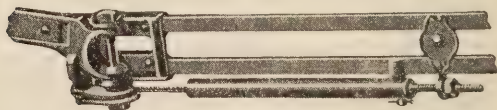
Galvanized Discount%

These arms also have as standard
equipment a bracket adjusting lug
which permits the slant of the awning
to be easily obtained. This adjusting
lug is strongly constructed and makes
a positive lock.

SPRING ATTACHMENTS FOR LATERAL ARMS

All Lateral Arms can also be
equipped with Spring Attachment, to
compel the arm to leave the building
freely. This Spring Attachment keeps
the awning cover taut when the awning is unrolled.

The spring has as a particular feature, an attach-
ment whereby greater or less tension may be applied
as desired. The spring is enclosed in a tube housing
which protects it from the elements, dirt, etc.



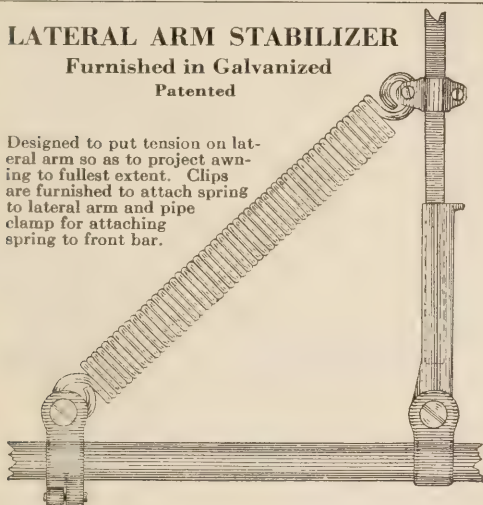
Black Galv.

Extra for Spring Attachment

LATERAL ARM STABILIZER

Furnished in Galvanized
Patented

Designed to put tension on lateral arm so as to project awning to fullest extent. Clips are furnished to attach spring to lateral arm and pipe clamp for attaching spring to front bar.

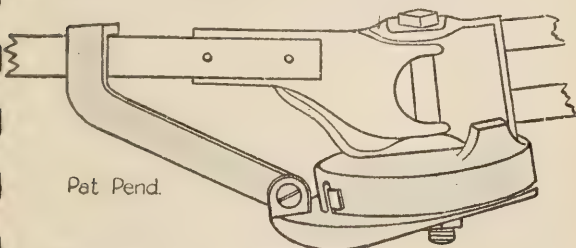


Please specify when ordering, the pipe size of front bar, also length and bracket number of lateral arm.

Stabilizer Complete.....

Each

SNUBBERS FOR LATERAL ARMS



Pat Pend.

This attachment is designed to improve the operation and efficiency of lateral arms. It makes the arm come to a full extension stop automatically, keeps the top sheet taut at all times when arm is either partially or fully extended.

The snubbers are very easily installed by changing the bolt in the center hinge.

No. 1 Snubber fits all No. 8 and 9 Arms. (Old Style)

No. 2 Snubber fits all No. 5 and 6 Arms. (Old Style)

Please specify when ordering the size lateral arm the snubber is to be used on.

SPRING REGULATOR

For Lateral Arms

Furnished in Black or Galvanized Finish

Patented

Patent No. 1,886,512



Spring Arm Regulator compels the Lateral Arm to leave the building freely. Continuous tension of spring on arm keeps top cover of awning taut during entire projection.

Even during excessive wind blows this regulator will compel the arm to fold back to the extended position when awning is in down position.

Easily installed by removing bolt in center hinge of arm.

Neat in appearance and positive in operation.

Please specify in ordering, the style number and length arm the regulator is to be used on. Also whether regulator is to be placed on right or left arm.

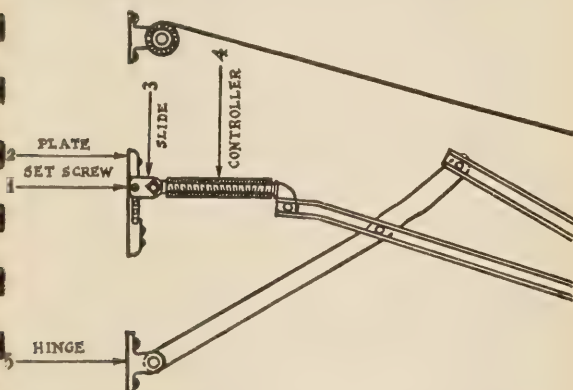
Each

- No. 1—For use with Nos. 8 and 9 Lateral Arms (Old Style)
- No. 2—For use with Nos. 5 and 6 Lateral Arms (Old Style)

ASTRUP PROJECTOR ARMS

Patented

Furnished in Black and Hot Galvanized Steel,
SOLID BRONZE OR DURALUMINUM



Designed for use on modern building fronts where the fastening space at times is extremely limited. Can also be used in place of slide rods or other controlling devices.

Astrup Projector Arms are strong and ruggedly constructed. Yet they are evenly balanced so that awnings so equipped raise and lower with effortless ease. Made in six stock sizes in adjustable styles. Adjustments can be made without changing any parts. The controller regulates the drop and projection.

Stock arms are furnished with two hinges and one jaw stub front bar connection.

NOTE: Prices on Brass, Bronze, Duraluminum, and Chromium Plated on Brass Arms will be quoted on request.

In ordering, specify whether hinges are to be fastened on brick, stone or wood. Also state whether pipe or wood front bar. If pipe, specify size. Also specify whether Elbows or Slip Tees are to be furnished for front bar. Also, whether awning roller and fixtures are mounted on open face or in recess box—if in recess box, advise distance the arms are to be offset so they will clear fixtures.

It is recommended that "throw-out" springs be used, whenever Projector Arms are goose-necked.

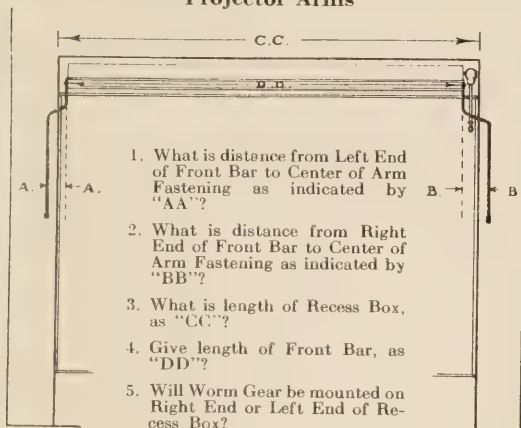
Special sizes made to order.

Stock Arm Number		1XA		1XB	
		Drop	Proj.	Drop	Proj.
These arms are limited to 14 turns:					
1st Turn.....		2'0"	x4'6"	3'4"	x5'0"
3rd Turn.....		2'2"	x4'6"	3'6"	x5'0"
5th Turn.....		2'4"	x4'6"	3'8"	x4'11"
7th Turn.....		2'6"	x4'6"	3'10"	x4'10"
9th Turn.....		2'8"	x4'6"	4'0"	x4'9"
12th Turn.....		2'11"	x4'6"	4'3"	x4'8"
14th Turn.....		3'1"	x4'6"	4'5"	x4'8"
To obtain the above sizes, the Slide and Hinge must be fastened as here indicated, making measurement from Center of Bolts to Middle of Roller		Slide	15"	18 $\frac{3}{4}$ "	
		Hinge	28 $\frac{1}{4}$ "	34 $\frac{1}{4}$ "	
Price, including fittings.....		Black			
		Galv.			

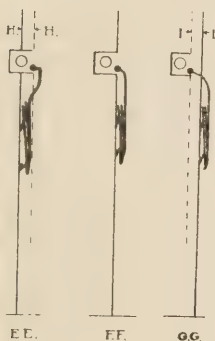
Stock Arm Number		2XA		2XB	
		Drop	Proj.	Drop	Proj.
These arms are limited to 20 turns:					
1st Turn.....		2'5"	x5'6"	3'6"	x6'0"
4th Turn.....		2'8"	x5'6"	3'10"	x5'11"
7th Turn.....		2'11"	x5'6"	4'2"	x5'11"
10th Turn.....		3'2"	x5'6"	4'6"	x5'11"
14th Turn.....		3'6"	x5'6"	4'11"	x5'9"
17th Turn.....		3'9"	x5'5"	5'3"	x5'8"
20th Turn.....		4'0"	x5'5"	5'6"	x5'7"
To obtain the above sizes, the Slide and Hinge must be fastened as here indicated, making measurement from Center of Bolts to Middle of Roller		Slide	21"	22 $\frac{3}{4}$ "	
		Hinge	35 $\frac{3}{4}$ "	40 $\frac{1}{2}$ "	
Price, including fittings.....		Black			
		Galv.			

Stock Arm Number		3XA		3XB	
		Drop	Proj.	Drop	Proj.
These arms are limited to 30 turns:					
1st Turn.....		2'10"	x6'6"	4'6"	x7'0"
5th Turn.....		3'1"	x6'6"	4'10"	x7'0"
10th Turn.....		3'5"	x6'6"	5'3"	x6'11"
15th Turn.....		3'10"	x6'6"	5'8"	x6'10"
20th Turn.....		4'2"	x6'6"	6'1"	x6'9"
25th Turn.....		4'7"	x6'6"	6'6"	x6'7"
30th Turn.....		4'11"	x6'5"	6'11"	x6'4"
To obtain the above sizes, the Slide and Hinge must be fastened as here indicated, making measurement from Center of Bolts to Middle of Roller.		Slide	25 $\frac{1}{2}$ "	27"	
		Hinge	42"	47 $\frac{3}{4}$ "	
Price, including fittings.....		Black			
		Galv.			

Data required to properly fill orders for Projector Arms

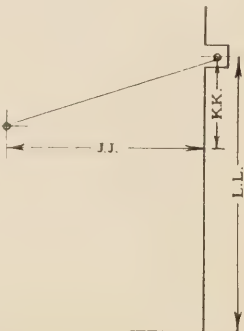


1. What is distance from Left End of Front Bar to Center of Arm Fastening as indicated by "AA"?
2. What is distance from Right End of Front Bar to Center of Arm Fastening as indicated by "BB"?
3. What is length of Recess Box, as "CC"?
4. Give length of Front Bar, as "DD"?
5. Will Worm Gear be mounted on Right End or Left End of Recess Box?

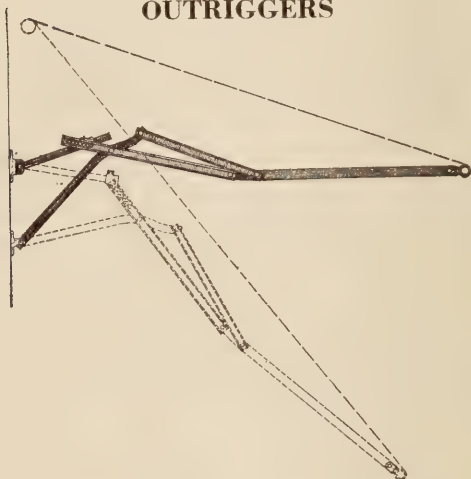


6. Does Front Bar extend the full length of the Recess Box, or is it the same length as the Awning Roller?
7. What is the diameter of the Front Bar?
8. Will Projector Arms be fastened as illustrated in "EE", "FF" or "GG"?
9. If fastening is to be made as shown in "EE", give distance from front of Recess Box to fastening surface as indicated by "HH"?
10. If fastening is to be made as shown in "GG", give distance from front of Recess Box to fastening surface as indicated by "II"?

11. What is Height of Recess Box at Front?
12. What is Height of Recess Box at Rear?
13. What is Depth of Recess Box?
14. What is Projection measurement "JJ"?
15. What is Wall measurement "KK"?
16. Give distance from center of Roller to sidewalk, as indicated by "LL"?



FLEXIBLE FOLDING OUTRIGGERS



Adjustable Type

Two Outriggers will carry an Awning 23 foot wide. Outriggers for Low Store Fronts. For Large Terraces.

Stock sizes adjustable to any ordinarily required drop and projection.

Stock Arms or Outriggers are easily adjusted to carry front bar of an Awning at a desired level above pavement. Full instructions for adjustment printed on tag which accompanies each Arm. NO special tools required. Cut shows range of adjustment. Arms can be set to stop at any intermediate point without changing hinges.

STOCK ARMS are made in seven sizes.

No. 4A provides 4-6 projection.

No. 5A provides 5-6 projection.

No. 6A provides 6-6 projection.

No. 7A provides 7-6 projection.

No. 8A provides 8-6 projection.

No. 9A provides 9-6 projection.

No. 10A provides 10-6 projection.

All Arms delivered with two hinges and one jaw stub front bar connection.

Stock Arm No. 4A

		Drop	Projection	
1st	hole	1-11	by 4-6	
2nd	"	2- 4½	by 4-6	
3rd	"	2-10	by 4-6	
4th	"	3- 3½	by 4-5½	
5th	"	3- 9	by 4-4½	
6th	"	4- 2½	by 4-2½	
7th	"	4- 7	by 4-0	
Black.....				\$8.00
Galv.....				10.80

Stock Arm No. 6A

		Drop	Projection	
1st	hole	2-10½	by 6-6	
2nd	"	3- 4	by 6-6	
3rd	"	3-10	by 6-6	
4th	"	4- 4	by 6-5¼	
5th	"	4- 9½	by 6-4¼	
6th	"	5- 2½	by 6-3	
7th	"	5- 8	by 6-1½	
Black.....				\$10.50
Galv.....				13.70

Goosenecks and Offsets
at additions to cost.

Stock Arm No. 8A

		Drop	Projection	
1st	hole	3- 6	by 8-6	
2nd	"	4- 6	by 8-6	
3rd	"	5- 3	by 8-6	
4th	"	6- 0	by 8-5	
5th	"	6-10	by 8-1	
6th	"	7- 7	by 7-10	
7th	"	8- 4	by 7-5	
Black.....				\$17.50
Galv.....				23.00

Stock Arm No. 10A

		Drop	Projection	
1st	hole	4- 0	by 10-6	
2nd	"	4- 8	by 10-7	
3rd	"	5- 5	by 10-7	
4th	"	6- 1	by 10-7	
5th	"	6- 9	by 10-5	
6th	"	7- 5	by 10-2	
7th	"	8- 1	by 10-0	
Black.....				\$22.00
Galv.....				30.00

Stock Arm No. 5A

		Drop	Projection	
1st	hole	2- 3	by 5-6	
2nd	"	2- 9	by 5-6	
3rd	"	3- 4	by 5-6	
4th	"	3-10½	by 5-5½	
5th	"	4- 4¾	by 5-4	
6th	"	4-11	by 5-2	
7th	"	5- 5	by 4-11½	
Black.....				\$9.40
Galv.....				12.40

Stock Arm No. 7A

		Drop	Projection	
1st	hole	3- 0	by 7-6	
2nd	"	3- 8	by 7-7	
3rd	"	4- 6	by 7-7	
4th	"	5- 3	by 7-6	
5th	"	6- 0	by 7-4	
6th	"	6- 9	by 7-1	
7th	"	7- 5	by 6-9	
Black.....				\$12.00
Galv.....				16.50

For Offsets state if
Right or Left and how
much.

Stock Arm No. 9A

		Drop	Projection	
1st	hole	3- 6	by 9-6	
2nd	"	4- 4	by 9-6	
3rd	"	5- 2	by 9-6	
4th	"	5-11	by 9-5½	
5th	"	6- 9	by 9-4	
6th	"	7- 5	by 9-2	
7th	"	8- 3	by 9-0	
Black.....				\$20.00
Galv.....				26.00

For stability under
wind stresses use Spring
Tie Downs.

All sizes can also be
furnished in Brass,
Bronze and Duralum-
inum to match store
front trim.

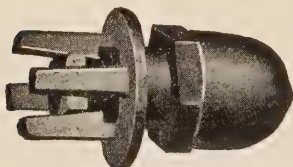
Prices quoted on re-
quest.

Special sizes made to order

When ordering special sizes, specify wall and pro-
jection of awning.

ORNAMENTAL ENDS

For Front Bars of Lateral Arm Awnings
Galvanized
Acorn Style



Per Hundred

No. 10—For insertion into $\frac{3}{4}$ -inch pipe

No. 11—For insertion into 1 -inch pipe

No. 12—For insertion into $1\frac{1}{4}$ -inch pipe

By applying a wrench on the hex section of Acorn End, the jaws expand, and the Acorn End is securely locked into position. Space is provided for a No. 6 Grommet for those who place Grommets in end of awning or wing.

TUBING ELBOWS

Galvanized



One end of this elbow will slip into $1\frac{5}{8}$ -inch O. D. Steel Tubing Front Bar, and the other end is tapped for $\frac{3}{4}$ -inch pipe arms.

Per Hundred

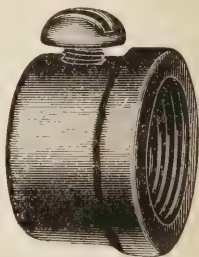
Tubing Elbows.....

PIPE CAPS

For ends of front bar on
lateral arm awnings

Galvanized

With Machine Screw



Per Hundred

No. 1 $\frac{3}{4}$ -inch Pipe

No. 2 1 -inch Pipe

EXPOSED FRONT BARS



These Exposed Front Bars are made to order of 2-inch steel tubing (for rigidity) and covered with **outside tubing** of any desired metal. The Front Bars are furnished with Knobs or Plug Ends of the same metal—also a rod to hold the cloth to the front bar, drilled, tapped and furnished with machine screws.

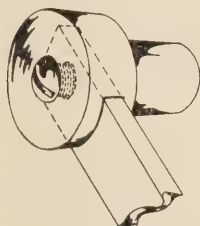
	Price per Foot
Satin Finish	High Polished

Aluminum.....	
Brass.....	
Bronze.....	
Chrome Plate on Brass.....	

When ordering advise length, metal, finish (whether satin or high polished.) Crating charge extra.

KNOBS FOR EXPOSED FRONT BARS

For Use with
Projector Arms



An opening is provided in the Knob to permit the outer bar of the Projector Arm to slip into and to provide rigid installation.

Each

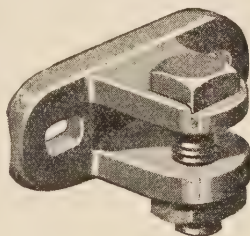
Aluminum.....
Brass.....

ATTACHMENT FOR TUBE FRONT BAR

Furnished in Black Painted, Cadmium Plated, Hot Galvanized and Solid Bronze

This attachment is designed for 2-inch Tube Exposed Front Bars, and can be used with all Tensolok and lateral type arms.

The back of the attachment is concave, and fastening is made through two countersunk holes.



Each

Black Painted Finish.....
Cadmium Plated or Hot Galvanized Finish.....
Solid Bronze.....

ROLLER GEAR AWNINGS

Roller gear awnings have been in use for many years, and have been long recognized as being the most practical type of awnings for use on store fronts. These awnings have always been constructed along the same lines with very little change or improvement, until recently, when important developments have virtually revolutionized their installation and operation.

The Astrup Company has prided itself in being the leader in the research and development of modern roller gear awning mechanism. We began by being the first to introduce Worm Gears containing steel inside gears, to greatly increase their life and efficiency. Later, to simplify the ease of operation of Worm Gears, we developed and patented Ball Bearing Worm Gears.

Our latest achievement is the streamlined "Zephyr" Worm Gear, primarily designed to blend with modern store front architecture, particularly so, when used in conjunction with specially designed awning hoods that protect the awning roller and cover.

With the introduction of concealed or recess awning boxes, we developed Worm Gears and Awning Mechanism for use in these boxes. The use of this equipment permitted the installation of the roller, gear and cover within the recess box; and when Astrup Tensolok Arms are used in the frame construction, all of the mechanism, including the arms, fold within the confines of the recess box; hence, the origin of the term "concealed awnings." This type of construction retains and enhances the beauty of the store front which would otherwise be marred by the unsightly awning mechanism. An added advantage of recess box construction is that all parts of the operating mechanism and the awning cover are shielded from the weather, assuring longer life and more satisfactory service to the unit.

The Astrup line of roller gear awning operating mechanism, is complete in every detail, and contains a unit to meet every condition or problem of store front construction or architecture.

SECTION III

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GALVANIZED STAMPED STEEL PULLEYS

With Swivel Eye and Machine Turned
Solid Steel Sheaves



Single



Double

Single

Per Hundred

No. 50	For $\frac{1}{8}$ -inch Rope.....
No. 100	For $\frac{3}{16}$ -inch Rope.....
No. 300	For $\frac{1}{4}$ -inch Rope.....
No. 400	For $\frac{5}{16}$ -inch Rope.....

Double

Per Hundred

No. 55	For $\frac{1}{8}$ -inch Rope.....
No. 105	For $\frac{3}{16}$ -inch Rope.....
No. 305	For $\frac{1}{4}$ -inch Rope.....



Number	Size of Rope	Single	Per Hd.
No. 3/0	$\frac{1}{8}$ -inch		
No. 1	$\frac{3}{16}$ -inch		
No. 3	$\frac{7}{32}$ -inch		
Double			
No. 4/0	$\frac{1}{8}$ -inch		
No. 2	$\frac{3}{16}$ -inch		

SPECIAL IRON PULLEYS

Galvanized Cast Iron

With Swivel Eye and Machine Turned
Solid Steel Sheaves



Single



Double

Number	Size of Rope	Single	Per Hd
No. 3/0	$\frac{1}{8}$ -inch	.....
No. 15	$\frac{3}{16}$ -inch	.....
No. 1	$\frac{3}{16}$ -inch	.....
No. 3	$\frac{1}{4}$ -inch	.....
		Double	
No. 4/0	$\frac{1}{8}$ -inch	.....
No. 25	$\frac{3}{16}$ -inch	.....
No. 2	$\frac{3}{16}$ -inch	.....

PULLEYS FOR SPRING ROLLER AWNINGS

Cadmium Plated



Top Pulley



Bottom Pulley

These pulleys are made of Special Iron and are cadmium plated. They have solid brass axles for smooth operation and long life.

The Top Pulley has a $\frac{3}{4}$ -inch wheel and the Bottom Pulley has a $\frac{5}{8}$ -inch wheel.

Pulling the cord to the side of the Bottom Pulley will make it fast at any desired point. To release, merely draw the cord to the center.

Per Hundred

Top Pulleys.....	
Bottom Pulleys.....	

AWNING BLOCKS

Malleable Iron, Swivel Eyes
Single Sheaves

Cad. Plate No.	Hot Galv. No.	Length of shell Inches	Dia. of Rope Inch	Per Hd.
0	0X	1	$\frac{1}{8}$	
1	1X	$1\frac{1}{2}$	$\frac{1}{4}$	
3	3X	$1\frac{3}{4}$	$\frac{5}{16}$	
5	*	$2\frac{1}{4}$	$\frac{3}{8}$	



**Cadmium Plated with
cast solid swivel eye.**



**Hot Galvanized with
wire swivel eye.**

Double Sheaves

Cad. Plate No.	Hot Galv. No.	Length of shell Inches	Dia. of Rope Inch	Per Hd.
00	00X	1	$\frac{1}{8}$	
2	2X	$1\frac{1}{2}$	$\frac{1}{4}$	
4	*	$1\frac{3}{4}$	$\frac{5}{16}$	
6	*	$2\frac{1}{4}$	$\frac{3}{8}$	



**Cadmium Plated with
cast solid swivel eye.**



**Hot Galvanized with
wire swivel eye.**

***NOTE:** Hot Galvanized Wire Swivel Eye Malleable Pulleys not made in sizes corresponding to Nos. 5, 4 and 6.



GLASS RINGS

Hand-Made

Per Hundred

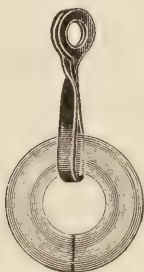
No. 1 Small . .

No. 2 Medium

No. 3 Large . .

STEEL CLIPS FOR GLASS RINGS

Galvanized



Per Hundred

Light Gauge Steel Clips

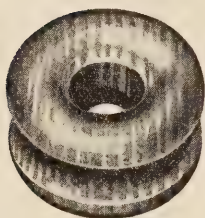
Heavy Gauge Steel Clips

Can be used on all sizes of Glass Rings.

Packed 200 pieces per

Light Brass Clips for Glass Rings can also be supplied in 5000 piece lots.

LIGNUM VITAE BULL'S EYES



Unstrapped

Per Hundred

1 -inch

1½-inch

STEEL WIRE STRAPPED LIGNUM VITAE BULL'S EYES

Per Hundred

1 -inch

1½-inch



WOOD AWNING BLOCKS

**Rope Strapped,
Wire Strapped
and Unstrapped**



Per Hundred
Single Double

2½-inch, Rope Strapped

2½-inch, Wire Strapped

2½-inch, Unstrapped

AWNING CLEATS

Galvanized Malleable Iron For Wood



Per Hundred
Galv.

Size
No. 0 Length $3\frac{3}{8}$ inches.....



Per Hundred
Galv.

Size
*No. 1 Length $4\frac{1}{2}$ inches.....
*No. 2 Length 6 inches.....
No. 3 Length 8 inches.....
No. 4 Length 10 inches.....



For Brick

Per Hundred
Galv.

Size
*No. 25 Length 6 inches.....
Use No. 12 gauge Wood Screw or $\frac{5}{16}$ -inch diameter
Lag Screw.



Bolt Cleat

Per Hundred
Galv.

Size
No. 30 Length $5\frac{3}{4}$ inches.....
Can be used with Expansion Fitting on stone or
brick and with machine screw on iron.

Galvanized Stamped Steel For Wood



Per Hundred
Galv.

Size
No. 9 Length $3\frac{3}{8}$ inches.....
No. 10 Length $3\frac{3}{4}$ inches.....
No. 11 Length $4\frac{1}{2}$ inches with two
screw holes.....
No. 12 Length 6 inches with two screw
holes.....
No. 13 Length 8 inches with two screw
holes.....
*Can also be supplied in Polished Brass.

ASTRUP HEAD ROD CLAMPS

For Attaching Awnings the Modern Way

Years ago it was the practice to attach the head of the awning to the house with staples, screw-eyes, hooks and tacks. Every time the awning was re-hung they had to be driven in different places in order to hold. In time, the building front looked as though a wood pecker had been at work on it.

Astrup Head Rod Clamps do away with this antiquated way of attaching awnings. They save the building, and they save time in erecting and dismantling, and so benefit both the building and the awning man.

Astrup Head Rod Clamps are permanent fixtures. They are neatly designed and so sturdily constructed as to last indefinitely. They come in a wide diversity of sizes and styles for fastening, quickly and securely, on wood, brick, stone, stucco, and steel sash.

HEAD ROD CLAMPS

Patented

Galvanized

No. 1 and 4

The thumb screws are made of brass so they can't rust in the holes, they are also **upset on the end** so they can't be taken out from the clamp and lost.

No. 1 For $\frac{3}{8}$ -inch Iron Head Rod, Hd.

No. 4 For $\frac{1}{2}$ -inch Iron Head Rod, Hd.



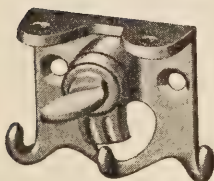
No. 2 and 3

COMBINATION CEILING AND FACE BOARD FIXTURES

No. 2. For double and triple windows, also small porch awnings using $\frac{3}{8}$ -inch Iron Head Rods.

No. 3. For large Porch and Store Awnings using $\frac{1}{2}$ -inch Iron Head Rods.

The neatest and most practical head rod holder ever devised.



No. 2 Clamp. Price, Hd., Galv.....

No. 3 Clamp. Price, Hd., Galv.....

FORGED WEATHERSTRIP CLAMP

Galvanized



Per Hundred

No. 40 For $\frac{3}{8}$ -inch iron head rod.....

MACHINE BOLT HEAD ROD CLAMPS

Patented

Galvanized



This is a strong and heavy construction style of head rod clamp. Furnished with brass wing nut to prevent rust.

Per Hundred

- No. 5 $\frac{3}{8}$ -inch iron
 No. 6 $\frac{1}{2}$ -inch iron
 No. 7 $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe

HEAD ROD CLAMPS FOR BRICK

Patented

Galvanized



These head rod clamps can be used on stone or brick, the wing nuts are made of brass to prevent rust. The bolts are also upset so they cannot be taken from clamp and lost.

Per Hundred

- No. 10 $\frac{1}{2}$ -inch iron head rod—use $\frac{5}{16}$ -inch or $\frac{3}{8}$ -inch lag screws for fastening. .
 No. 11 $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe head rod—use $\frac{3}{8}$ -inch lag screw for fastening.

MACHINE BOLT HEAD ROD CLAMP

Patented

Galvanized

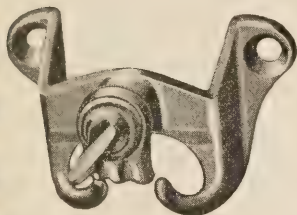
This head rod clamp can be used on extremely large porch and store awnings or where heavy winds are encountered as it will withstand heavy strains.

No. 13 will take either

$\frac{3}{8}$ -inch or $\frac{1}{2}$ -inch iron head rod



Per Hundred

EXTENSION HEAD ROD CLAMPPatented
Galvanized

These head rod clamps have a projection of 1 inch to clear screens, hinges or any other obstructions.

Per Hundred

No. 16 $\frac{3}{8}$ -inch iron.....No. 17 $\frac{1}{2}$ -inch iron.....**MACHINE BOLT HEAD ROD CLAMP**Patented
Galvanized

Per Hundred

No. 18. For
 $\frac{1}{2}$ -inch iron
head rod...

MACHINE BOLT HEAD ROD CLAMPSFor Roller Curtains
Galvanized

This clamp has an opening for ropes to pass through.

Per Hundred

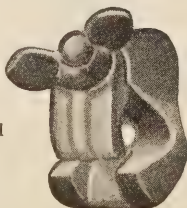
No. 20 For $\frac{3}{8}$ -inch
or $\frac{1}{2}$ -inch iron
head rod.....

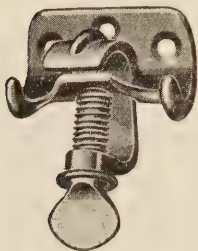
NARROW BASE HEAD ROD CLAMPPatented
Galvanized

These clamps have a very small base and are fastened with a single screw.

Per Hundred

No. 30 For $\frac{1}{2}$ -inch
iron head rod....





HEAD ROD CLAMPS

For Metal Window Sash
Patent applied for
Galvanized

Per Hundred

No. 23 Will take
 $\frac{3}{8}$ -inch or $\frac{1}{2}$ -inch
iron head rod

This head rod clamp has an adjustable finger so that it can be used on either $\frac{3}{8}$ -inch or $\frac{1}{2}$ -inch head rods. It was designed particularly for use on metal sash or in confined places where there is only $\frac{3}{4}$ -inch stock for the head rod clamp to fasten.

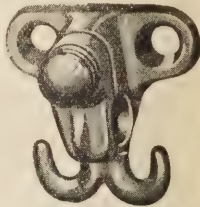
HEAD ROD CLAMP

With Spring Attachment

Patent
No. 1,931,148
Galvanized



Style 25



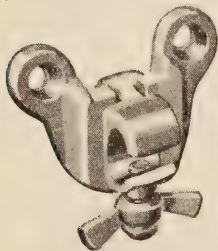
Style 26

Per Hundred

No. 25 For $\frac{3}{8}$ -inch iron, single hook...

No. 26 For $\frac{3}{8}$ -inch iron, double hook...

Brass tension spring applies sufficient pressure to finger clamp to hold head rod securely in position; yet is flexible enough to allow swing which effects release. Head rod can quickly be placed into position or removed as desired.



HEAD ROD CLAMP

Pat. No. 1,950,940
Galvanized

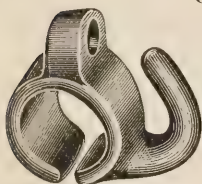


Specially designed for use with glass rings. It allows for quick installation and speedy removal of awnings.

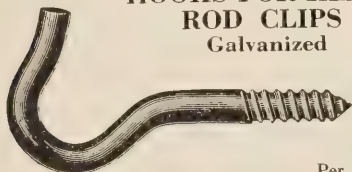
When awnings are removed, the clamping unit, glass rings and head rod can be removed complete with awning.

Per Hundred

No. 28 For $\frac{1}{2}$ -inch iron head rod

HEAD ROD CLIPS**Galvanized**

Per Hundred

For $\frac{1}{2}$ -inch iron.For $\frac{5}{8}$ -inch iron
or $\frac{3}{8}$ -inch pipe**HOOKS FOR HEAD
ROD CLIPS**
Galvanized

Per Hundred

No. 1 2-inches long.....

No. 2 $2\frac{1}{4}$ -inches long.....

Packed 100 pieces in a box.

PULLEY HOLDER**Galvanized**

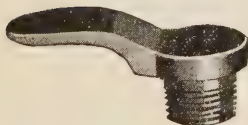
Per Hundred

For $\frac{3}{8}$ -in. iron head rodFor $\frac{1}{2}$ -in. iron head rod

Designed to eliminate the sewing of pulleys to iron head rod of awning. The pulley holder can be slipped over head rod to provide additional attachment for pulleys in the event more pulleys are needed than there are hooks on head rod clamps.

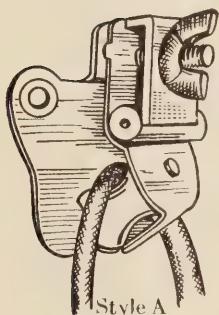
**BRASS HEAD ROD HOOK**

Per Hundred

No. 1 Threaded
for $\frac{3}{8}$ -inch
pipe.....

Made of brass so that it can be bent over or under rod without breaking.

PULL-EASY PULLEYS AND HEAD CLAMPS



Style A

For $\frac{3}{8}$ -inch and $\frac{1}{2}$ -inch
Head Rods
Cadmium Plated Stamped
Steel
Patent Nos. 1840614 and 1976708
For Wood

For use on houses and stores. They are strongly constructed, easy to install, and permit free operation of rope.

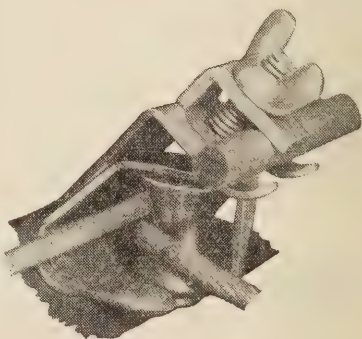
Brick plates can be furnished for use with toggle or lag bolts.

Per Hundred

Style A.....

FOR BRICK AND NARROW CASINGS

This fixture is compact and sturdy. It projects $1\frac{1}{2}$ inches from the window casing and allows for air cooled circulation. It will clear practically all screen hooks.

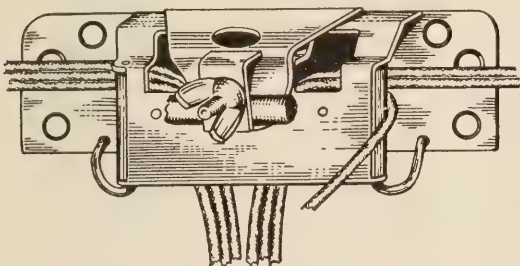


Per Hundred

Style B.....

PULL EASY PULLEYS AND HEAD ROD CLAMPS

Cadmium Plated Stamped Steel
Patent Nos. 1840614 and 1976708



Jumbo Model

Designed to accommodate ropes from both sides so awning can be pulled up from center of store without additional pulleys. For use on large rope hoist awnings. Can be used with or without head rods. When ordering the Jumbo Model, specify whether Style A or Style B holders, if any, are wanted. They slip right over the fixture.

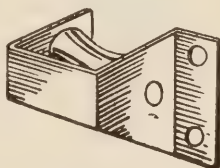
Per Hundred

Jumbo Model.....

SCREEN ROLLER

The Style C No. 1 Screen Roller is to be used for small awnings up to 7 feet. It is a rope saver.

Place the plain end of roller against the screen molding outside of screen over the hole where ropes enter the house. Drill hole straight through screen, the awning will raise with less effort. It will fit any screen.



Style C No. 1

Per Hundred

Style C No. 1.....

SCREEN PULLEY



It is a sturdy, solid pulley to fasten on screens or window sills where ropes come through. It is a good pulley for porch curtains and it is so constructed that you can fasten it almost any place and get a direct straight pull. It will handle three to five $\frac{3}{16}$ -inch ropes with ease.

Per Hundred

Style C No. 3.....

ROD AND RAFTER HOLDERS

For Stationary Awnings

Patented

Patent No. 1,813,525

Galvanized

For Wood

Per Hundred

No. 1 For $\frac{1}{2}$ -inch
iron head rod.....

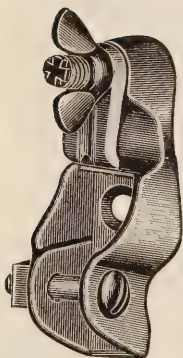


For Brick
Galvanized

Space is provided between
jaws for $\frac{3}{8}$ -inch diameter
lag screw to fasten rod and
rafter holder to brick wall.

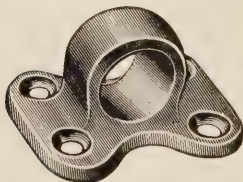
Per Hundred

No. 2 For $\frac{1}{2}$ -inch
iron head rod..



BRACKET FOR HEAD ROD

Galvanized Finish



Per Hundred
Galv.

Fits $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe head rod

SECTION IV

FRAME FITTINGS

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ELBOWS "ON THE SQUARE"

Here is the most common of pipe fittings. It is used in plumbing, electrical work, stoves, and other articles too numerous to mention. For this class of work it is used merely as a connection to make a 90 degree angle bend. Its design is like this:



← This style elbow known as plumbing or stove elbow. Note long curvature.

This style of elbow is not satisfactory for awning work, for as you will notice, from the dotted lines, when an awning cover is drawn around the fitting, it leaves a surplus of canvas that is unsightly.

Astrup Elbows, however, are made so that this extreme long curvature is practically eliminated. The angle is rounded just enough so that the awning cover can be slipped over without danger of tearing. It is designed like this:



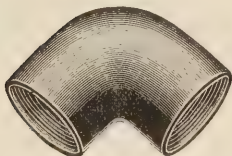
← Astrup Awning Elbows. Note long curvature practically eliminated.

Note the comparatively small space between the elbow proper and the dotted line. Use Astrup "Square Corner" Elbows, designed especially for awning work. An exclusive Astrup feature. Tapped at exact right angles and chamfered at the ends for quick installation on the pipe. Hot Galvanized, too, like other Astrup Awning Hardware. They are no more expensive than ordinary elbows.

ELBOWS

Galvanized

MALLEABLE IRON

Per Hundred
Galv.

No. 0	For	$\frac{1}{8}$ -inch pipe	.....
No. 1	For	$\frac{1}{4}$ -inch pipe	.....
No. 2	For	$\frac{3}{8}$ -inch pipe	.....
No. 3	For	$\frac{1}{2}$ -inch pipe	.....
No. 4	For	$\frac{3}{4}$ -inch pipe	.....
No. 5	For	1 -inch pipe	.....
No. 14	For	$1\frac{1}{4}$ -inch pipe	.....

REDUCING ELBOWS

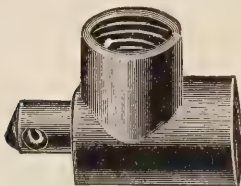
Per Hundred
Galv.

No. 6	$\frac{1}{4}$ x $\frac{3}{8}$ -inch pipe	.....
No. 7	$\frac{3}{8}$ x $\frac{1}{2}$ -inch pipe	.....
No. 75	$\frac{3}{8}$ x $\frac{3}{4}$ -inch pipe	.....
No. 8	$\frac{1}{2}$ x $\frac{3}{4}$ -inch pipe	.....
No. 85	$\frac{1}{2}$ x 1 -inch pipe	.....
No. 9	$\frac{3}{4}$ x 1 -inch pipe	.....
No. 10	1 x $1\frac{1}{4}$ -inch pipe	.....
No. 11	$1\frac{1}{4}$ x $1\frac{1}{2}$ -inch pipe	.....

With set screws extra per hundred.

SPECIAL ELBOWS

Galvanized

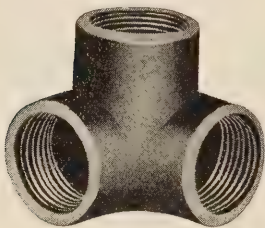


Per Hundred
Galv

No. 1	$\frac{3}{8}$ x $\frac{3}{8}$ -inch pipe.....
No. 2	$\frac{3}{8}$ x $\frac{1}{2}$ -inch pipe.....
No. 3	$\frac{1}{2}$ x $\frac{1}{2}$ -inch pipe.....
No. 4	$\frac{1}{2}$ x $\frac{3}{4}$ -inch pipe.....
No. 5	$\frac{3}{4}$ x $\frac{3}{4}$ -inch pipe.....

SIDE OUTLET ELBOWS

Galvanized



Per Hundred
Galv.

No. 25	$\frac{3}{8}$ -inch pipe, all outlets.....
No. 26	$\frac{1}{2}$ -inch pipe, all outlets.....
No. 27	$\frac{3}{4}$ -inch pipe, all outlets.....
No. 28	1-inch pipe, all outlets.....
No. 29	1 $\frac{1}{4}$ -inch pipe, all outlets.....

GUY WIRE TIGHTENER

**For Drop Curtains
Galvanized**



Projection $1\frac{1}{4}$ inches from back plate to center of hole where $\frac{7}{32}$ -inch diameter by $1\frac{7}{8}$ -inch length eye bolt is fastened.

Designed to draw up slack on cable wire when drop curtains are raised or lowered by means of ring sliding over cable.

The cable can be secured through screw eye that is inserted in floor and cable can then be passed through eye bolt in guy wire tightener. By then drawing up wing nut proper tension can be secured.

If so specified eye bolts in guy wire tighteners can be furnished with open eyes.

Price per hundred.....

TWISTED WIRE CABLE

Galvanized

Per Hundred
Feet

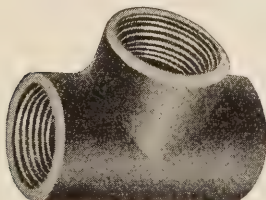
No. 18.....

Put up in 100 ft. coils

For use in connection with Guy Wire Tighteners

PLAIN THREE-WAY THREADED TEES

Galvanized



Per Hundred

No. 10	$\frac{1}{2}$ x $\frac{3}{8}$ x $\frac{1}{2}$ -inch pipe.....
No. 11	$\frac{3}{4}$ x $\frac{3}{8}$ x $\frac{1}{2}$ -inch pipe.....
No. 12	$\frac{3}{4}$ x $\frac{3}{8}$ x $\frac{3}{4}$ -inch pipe.....
No. 13	1 x $\frac{3}{8}$ x $\frac{3}{4}$ -inch pipe.....

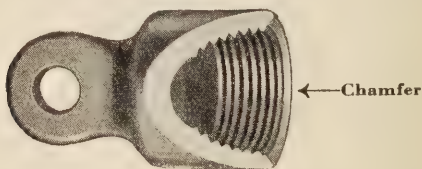
INTERESTING FACTS ON AWNING HARDWARE

To a novice, awning hardware may just appear a collection of iron and steel parts; but to an awning man who is thoroughly experienced and who takes pride in his work, awning hardware is the foundation of the awning upon which everything depends.

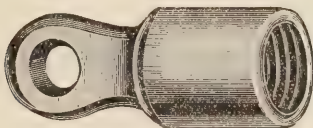
It is impossible for any awning cover to appear to advantage unless the frame is properly made. The fittings used in the frame "foundation" must be constructed perfectly, and careful attention must be given to the machining.

Confidence can be reposed in Astrup Awning Hardware. It is designed under supervision of men who have a great many years of practical awning experience. These men know what is required in an awning fitting.

Take for example Astrup Eye Ends. Each is made of the highest grade malleable iron—iron that will withstand excessive shocks and strains. These Eye Ends are strongly constructed and designed in proper proportions. Each fitting is rust-proofed in the Hot Galvanized finish—the best rust-proof coating known to resist corrosion. Astrup Eye Ends are all uniformly tapped and machined. Constant inspection assures that. Each Eye End is chamfered (see illustration below) at the end of tapped hole to assure easy starting of the fitting on the frame.



Each piece of Astrup Awning Hardware has similar advantages. That's why "Astrup Awning Hardware is designed first to last."

FRAME OR EYE ENDS**Galvanized****Small Eye**Per Hundred
Galv.

No. 0	For	$\frac{1}{8}$ -inch pipe.....
No. 1	For	$\frac{3}{8}$ -inch iron.....
*No. 2	For	$\frac{1}{4}$ -inch pipe or $\frac{1}{2}$ -inch iron.....
*No. 3	For	$\frac{3}{8}$ -inch pipe or $\frac{5}{8}$ -inch iron.....
*No. 4	For	$\frac{1}{2}$ -inch pipe.....
*No. 5	For	$\frac{3}{4}$ -inch pipe.....
No. 12	For	1 -inch pipe.....
No. 13	For	1 $\frac{1}{4}$ -inch pipe.....
No. 14	For	1 $\frac{1}{2}$ -inch pipe.....

No. 1 has Standard Bolt Thread.

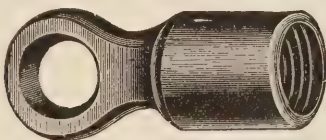
*Can be supplied in Polished Brass.

FRAME OR EYE ENDS**Specially Machined**Per Hundred
Galv.

No. 25	For	$\frac{1}{4}$ -inch pipe or $\frac{1}{2}$ -inch iron
No. 35	For	$\frac{3}{8}$ -inch pipe or $\frac{5}{8}$ -inch iron

To provide snug fit when used in connection with screws of Camel Back Hinges. Eliminates excessive play and rattle.

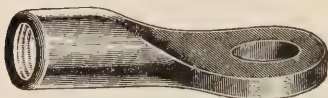
The above Eye Ends can also be furnished with special snug fit holes for use in connection with cotter pins, rivets, etc., providing sufficient quantities are ordered.

**Large Eye**Per Hundred
Galv.

No. 6	For	$\frac{3}{8}$ -inch iron.....
No. 7	For	$\frac{1}{4}$ -inch pipe or $\frac{1}{2}$ -inch iron
No. 8	For	$\frac{3}{8}$ -inch pipe or $\frac{5}{8}$ -inch iron
No. 9	For	$\frac{1}{2}$ -inch pipe.....
No. 10	For	$\frac{3}{4}$ -inch pipe.....
No. 11	For	1-inch pipe.....

No. 6 has Standard Bolt Thread.

SIDE FRAME END Galvanized



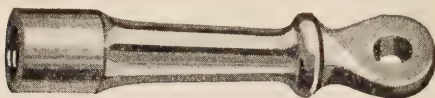
Per Hundred
Galv.

For $\frac{3}{8}$ -inch iron, bolt thread.....

For $\frac{1}{2}$ -inch iron, pipe thread.....

EXTENSION FRAME OR EYE END Galvanized

3 $\frac{1}{2}$ inches from Center of Eye to End of Barrel



For $\frac{1}{2}$ inch iron, pipe thread.

Per Hundred
Galv.

No. 65 Extension Frame End with Small
Eye.....

No. 66 Extension Frame End with Large
Eye.....

Designed for use on frames where 31" width
awning material is now used but where original
frame had been made for 28 $\frac{1}{2}$ " width material.

PLAIN COUPLINGS Galvanized

Per Hundred
Galv.



No. 1 For $\frac{1}{8}$ -inch pipe

No. 2 For $\frac{1}{4}$ -inch pipe

No. 3 For $\frac{3}{8}$ -inch pipe

No. 4 For $\frac{1}{2}$ -inch pipe

No. 5 For $\frac{3}{4}$ -inch pipe

No. 6 For 1-inch pipe

GOOSENECK PLUG ENDS

Black and Galvanized
Malleable Iron



Per Hundred
Black Galv.

No. 1 For $\frac{3}{4}$ -inch pipe.....

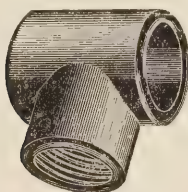
No. 2 For 1-inch pipe.....

SLIP T OR MIDDLE SOCKETS

Galvanized

Per Hundred
Galv.

No.	Pipe Size Extension	Pipe Size Front Bar
1....	$\frac{3}{8}$ -inch	$\frac{3}{8}$ -inch..
7....	$\frac{3}{8}$ -inch....	$\frac{1}{2}$ -inch..
2....	$\frac{1}{2}$ -inch....	$\frac{1}{2}$ -inch..

Per Hundred
Galv.

No.	Pipe Size Extension	Pipe Size Front Bar
3.....	$\frac{1}{2}$ -inch.....	$\frac{3}{4}$ -inch.....
*4.....	$\frac{3}{4}$ -inch.....	$\frac{3}{4}$ -inch.....
*5.....	$\frac{3}{4}$ -inch.....	1 -inch.....
*6.....	1 -inch.....	1 -inch.....
*8.....	1 -inch.....	$1\frac{1}{4}$ -inch.....
*9.....	$1\frac{1}{4}$ -inch.....	$1\frac{1}{4}$ -inch.....
*10.....	$1\frac{1}{4}$ -inch.....	$1\frac{1}{2}$ -inch.....

*When these sizes of Slip Tees equipped with
set screws hundred extra.

BRASS CLIPS FOR EXTENSION RODS



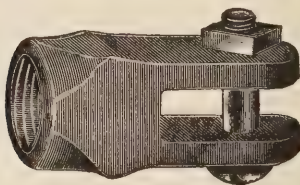
Per Hundred

- No. 1 For $\frac{1}{4}$ -in. pipe ($\frac{1}{2}$ -in. iron fits same Front Bar).....
- No. 2 For $\frac{3}{8}$ -in. pipe ($\frac{5}{8}$ -in. iron fits same Front Bar).....
- No. 3 For $\frac{3}{8}$ -in. pipe ($\frac{5}{8}$ -in. iron fits $\frac{1}{2}$ -in. pipe Front Bar).....
- No. 4 For $\frac{1}{2}$ -in. pipe ($\frac{3}{4}$ -in. iron fits $\frac{1}{2}$ -in. pipe Front Bar).....
- No. 5 For $\frac{1}{2}$ -in. pipe ($\frac{3}{4}$ -in. iron fits $\frac{3}{4}$ -in. pipe Front Bar.).....
- No. 6 For $\frac{3}{8}$ -in. pipe ($\frac{5}{8}$ -in. iron fits $\frac{3}{4}$ -in. pipe Front Bar).....

These Clips are made of brass so they can be opened and closed without breaking.

JAW OR STUB ENDS

Galvanized with R. H. Stove Bolt

Per Hundred
Galv.

- No. 0 For $\frac{1}{4}$ -inch pipe or $\frac{1}{2}$ -inch iron
- No. 1 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe
- No. 2 For $\frac{1}{2}$ -inch pipe.....
- No. 10 For $\frac{3}{4}$ -inch pipe.....

With cotter rivet or machine bolt,
per hundred.

extra

Y STUB JAW END
Galvanized
FOR $\frac{5}{8}$ x $\frac{1}{2}$ -INCH IRON
with R. H. STOVE BOLT



Per Hundred
Galv.

No. 1 $\frac{5}{8}$ x $\frac{1}{2}$ inch iron.....

With cotter rivet or machine bolt, extra
per hundred.



Style 1



Style 2

Any length style of bracket or hinge can be made by using plate No. 1 or 7 for the upper part of the bracket and plate No. 6 for the lower part on Style 1.

On Style No. 2 use plate No. 1 or 7 for the upper part of bracket and No. 8 for the lower part.

PLATES

Galvanized



Per Hundred
Galv.

No. 1 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe.



With Concave Back

Per Hundred
Galv.

No. 2 For $\frac{1}{2}$ -inch pipe.....

PLATES FOR IRON OR BRICK

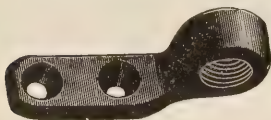


Per Hundred
Galv.

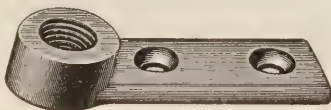
No. 3 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe

SIDE PLATES

Galvanized

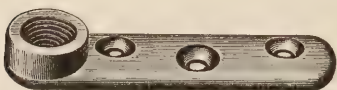
Per Hundred
Galv.No. 15 For $\frac{1}{2}$ -inch ironNo. 4 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipePer Hundred
Galv.No. 5 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe

PLATES

Per Hundred
Galv.No. 6 For $\frac{1}{2}$ -inch iron

PLATES

Galvanized

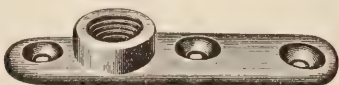


With Concave Back

Per Hundred
Galv.

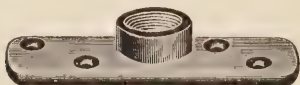
No. 7 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe

No. 14 For $\frac{1}{2}$ -inch pipe.....



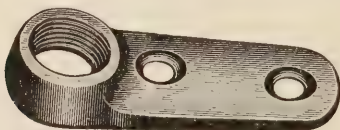
Per Hundred
Galv.

No. 10 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe



Per Hundred
Galv.

No. 11 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe

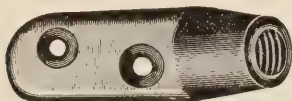


Per Hundred
Galv.

No. 25 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe

ANGLE PLATES

Galvanized



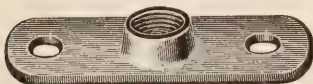
Per Hundred
Galv.

- No. 8 For $\frac{1}{2}$ -inch iron
No. 9 For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe

PLATES

Galvanized

For Brick



Per Hundred
Galv.

- No. 16 For $\frac{3}{4}$ -inch pipe
No. 17 For 1-inch pipe

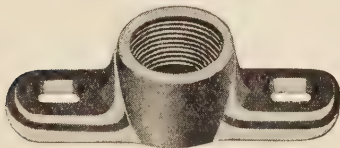


Per Hundred
Galv.

- No. 18 For $\frac{5}{8}$ inch iron or $\frac{3}{8}$ -inch pipe
Holes for $\frac{3}{8}$ -inch Lag or Cap Screw.

RAIL PLATES

Galvanized



With Concave Back

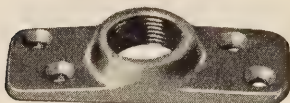
Per Hundred
Galv.

- No. 35 For $\frac{3}{4}$ -inch pipe

With $\frac{11}{32}$ -inch width by $\frac{1}{2}$ -inch length oblong holes. Specially designed for fastening on iron or pipe rails.

PLATES

Galvanized



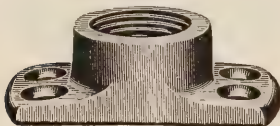
For Wood

Per Hundred
Galv.

- No. 12 For $\frac{3}{4}$ -inch pipe.....
 No. 13 For 1-inch pipe.....

STUB PLATES

Galvanized



Should be used on small awnings where very little bearing surface is required.

Per Hundred
Galv.

- No. 19 $\frac{3}{4}$ -inch pipe.....
 No. 20 1-inch pipe.....
 No. 21 $1\frac{1}{4}$ -inch pipe.....

POST PLATES

Galvanized

Per Hundred
Galv.

- No. 31 $\frac{1}{2}$ -inch pipe.....

WASTE NUTS

Galvanized

Per Hundred
Galv.No. 1 For $\frac{3}{8}$ -inch pipeNo. 2 For $\frac{1}{2}$ -inch pipeNo. 3 For $\frac{3}{4}$ -inch pipe

No. 4 For 1-inch pipe

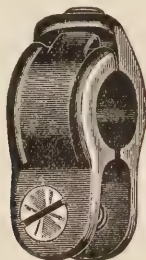
FLANGES

Galvanized

Outside
DiameterPer Hundred
Galv.No. 1 For $\frac{3}{8}$ -in. pipe, $2\frac{7}{8}$ in.No. 2 For $\frac{1}{2}$ -in. pipe, 3 in.No. 3 For $\frac{3}{4}$ -in. pipe, $3\frac{3}{8}$ -in.No. 4 For 1 -in. pipe, $3\frac{5}{8}$ in.No. 5 For $1\frac{1}{4}$ -in. pipe, 4 in.No. 6 For $1\frac{1}{2}$ -in. pipe, $4\frac{3}{8}$ in.

PIPE CLAMPS

Galvanized with Round Head Stove Bolts



Per Hundred
Galv.

No. 0	For 1/2-inch iron.....
No. 1	For 3/8-inch pipe.....
No. 2	For 1/2-inch pipe.....
No. 3	For 3/4-inch pipe.....
No. 4	For 1-inch pipe.....

HINGED PIPE CLAMPS

Galvanized with Round Head Stove Bolts



Per Hundred
Galv.

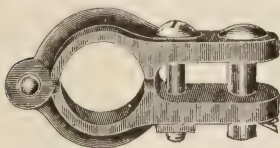
No. 19	5/8-inch iron.....
No. 20	3/8-inch pipe.....
No. 21	1/2-inch pipe.....
No. 22	3/4-inch pipe.....
No. 23	1 -inch pipe.....
No. 24	1 1/4-inch pipe.....
No. 25	1 1/2-inch pipe.....

With machine bolts

extra per hundred.

CLAMP HINGES

Galvanized



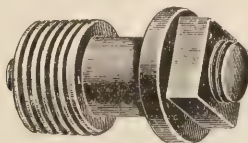
Fitted with $\frac{1}{4}$ -in. diameter stove bolt and $\frac{3}{8}$ -in. cotter rivet for eye end.

Per Hundred
Galv.

No. 12	For $\frac{1}{2}$ -in. pipe.....
No. 13	For $\frac{3}{4}$ -in. pipe.....
No. 14	For 1-in. pipe.....

SIDE OR NUT STUB

Galvanized



Per Hundred

For $\frac{5}{8}$ -inch iron or $\frac{3}{8}$ -inch pipe.....
 For wood use with our No. 1, 4, 5, 7, 9, 10 plates.
 For iron use with our No. 3 plate and on stone or
 brick, use with Expansion Fitting.

"S" HOOKS

Galvanized

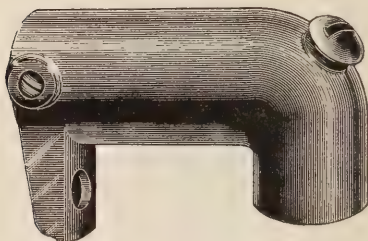


Per Hundred

No. 1	$\frac{3}{8}$ -inch opening.....
No. 2	$\frac{1}{2}$ -inch opening.....
No. 3	$\frac{5}{8}$ -inch opening.....

TRUSS ROD ENDS

Galvanized



Per Hundred
Galv.

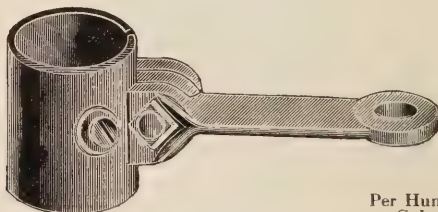
No. 1 $\frac{3}{4}$ -in. front rod by $\frac{3}{4}$ -in. arms..

No. 2 1-in. front rod by $\frac{3}{4}$ -in. arms..

If set screws are not wanted on corner deduct
per hundred.

TRUSS ROD BRACE

Galvanized



Per Hundred
Galv.

No. 11 $\frac{3}{4}$ -inch front rod by $3\frac{1}{2}$ -in.
projection.....

No. 12 1-inch front rod by $3\frac{1}{2}$ -in.
projection.....

No. 21 $\frac{3}{4}$ -inch front rod by $5\frac{1}{4}$ -in.
projection.....

No. 22 1-inch front rod by $5\frac{1}{4}$ -in.
projection.....

NUTS

For Ends of Truss Rods

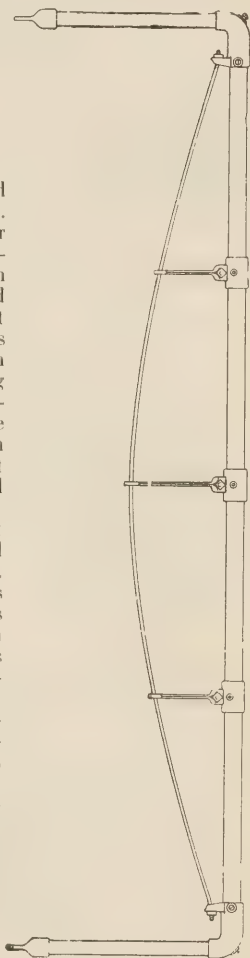
Per Hundred
Galv.

$\frac{3}{8}$ -in. nut to fit $\frac{3}{8}$ -in. iron.....

HOW TO USE OUR TRUSS ROD FITTINGS

Cut pipe for front rod to the correct length. Slide the proper number of Truss Rod Braces onto front rod and then screw on the Truss Rod Ends. Tighten set screws at once on Truss Rod Ends. Cut $\frac{3}{8}$ -inch iron truss rod long enough so that it projects $\frac{1}{2}$ inch through hole on Truss Rod Ends on each side and then cut long $\frac{3}{8}$ -inch bolt thread on each end.

Loosen machine bolt on Truss Rod Braces and remove projection arms. Slide the projection arms onto the $\frac{3}{8}$ -inch truss rod. Place rod through hole on Truss Rod Ends and tighten rod with $\frac{3}{8}$ -inch nuts at each end till you get proper tension. Then lift the projection arms of the Truss Rod Braces which are on the $\frac{3}{8}$ -inch truss rod into position and tighten machine bolts, also the set screw. If front rod is not trussed enough tighten nuts till you get proper adjustment.



SIDE COTTER SLIDE

Galvanized

With Galvanized Cotter Pin



Per Hundred

No. 1 $\frac{3}{8}$ -in. round iron

SIDE NUT SLIDE

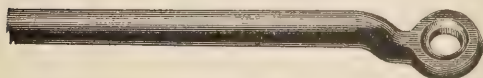
Galvanized

Per Hundred

No. 2 $\frac{3}{8}$ -in. round iron

SLIDE RODS

Galvanized Iron

 $\frac{3}{8}$ -inch diameter

Lgth.	Per Hd.	Lgth.	Per Hd.
12 in.....		36 in.....	
18 in.....		42 in.....	
24 in.....		48 in.....	
30 in.....		54 in.....	

$\frac{1}{2}$ -inch diameter slide rods can also be furnished in lengths from 12 inches to 72 inches.

JAW SLIDE

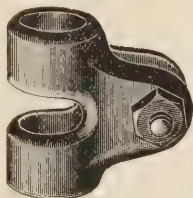
Galvanized with machine screw



Per Hundred

No. 3	$\frac{3}{8}$ -inch iron.....	
No. 4	$\frac{1}{2}$ -inch iron.....	
No. 12	$\frac{5}{8}$ -inch iron.....	
No. 13	$\frac{3}{4}$ -inch pipe.....	
No. 13	slide is fitted with cotter rivet or machine bolt.	

JAW SLIDES



Galvanized
With round head Stove
Bolts

Per Hundred
Galv.

No. 5 $\frac{5}{8}$ -in. iron

No. 55 $\frac{3}{8}$ -in. pipe

No. 6 $\frac{1}{2}$ -in. pipe

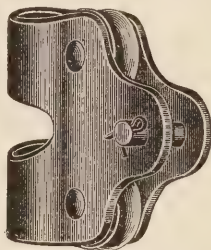
ROLLER SLIDES FOR ROUND IRON

With $\frac{1}{4}$ -inch Cotter Rivets
Made of Heavy Gauge Sheet Steel
Galvanized

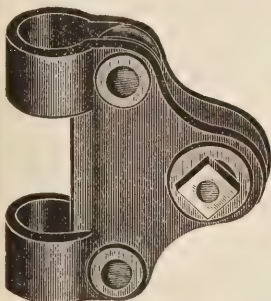
Per Hundred

No. 17 $\frac{5}{8}$ -in. iron
or $\frac{3}{8}$ -in. pipe..

No. 18 $\frac{3}{4}$ -in. iron
or $\frac{1}{2}$ -in. pipe..



ROLLER SLIDES FOR ROUND IRON



Galvanized

With round head
Stove Bolts

No. 9 $\frac{3}{4}$ -inch iron,
Black hd.

No. 9 $\frac{3}{4}$ -inch iron,
Galv. hd.

All the above Slides with cotter rivets or machine
bolts, extra per hundred.

SLIDE ROD SOCKETS

Galvanized

Plain, NOT Threaded



Per Hundred
Galv.

No. 3	$\frac{3}{8}$ -inch round iron
No. 4	$\frac{1}{2}$ -inch round iron
No. 5	$\frac{5}{8}$ -inch round iron
No. 55	$\frac{3}{8}$ -inch pipe
No. 6	$\frac{1}{2}$ -inch pipe

SLIDE ROD ENDS

Galvanized

THREADED

Per Hundred
Galv.

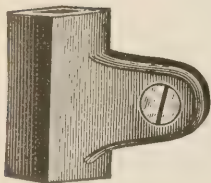
No. 7	$\frac{3}{8}$ -inch round iron
No. 8	$\frac{1}{2}$ -inch round iron
No. 9	$\frac{5}{8}$ -inch round iron or $\frac{3}{8}$ -inch pipe
No. 10	$\frac{1}{2}$ -inch pipe
No. 13	$\frac{3}{4}$ -inch pipe

NOTE: $\frac{3}{8}$ -inch iron Sockets and Ends have only one screw hole.

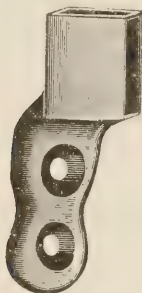
No. 7 has Standard Bolt Thread.

SQUARE JAW SLIDES

Galvanized

Per Hundred
Galv.No. 10 $\frac{1}{2}$ -in. ironNo. 11 $\frac{5}{8}$ -in. iron**SQUARE SOCKETS**

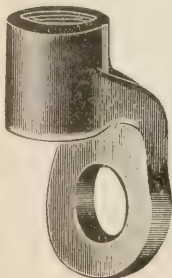
Galvanized

Per Hundred
Galv.No. 1 $\frac{1}{2}$ -inch ironNo. 2 $\frac{5}{8}$ -inch iron**SLIDE ROD END**

Galvanized

Threaded

For Iron or Brick

Per Hundred
Galv.No. 12 $\frac{1}{2}$ -inch ironNo. 11 $\frac{5}{8}$ -inch ironNo. 14 $\frac{1}{2}$ -inch pipe

PIN OR NUT ENDS

Galvanized



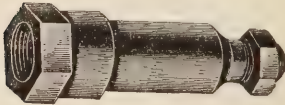
With regular 1 $\frac{5}{8}$ -inch Shank

Per Hundred
Galv.

No. 0	For 1 $\frac{1}{2}$ -in. iron.....
No. 1	For 3 $\frac{3}{8}$ -in. pipe or 5 $\frac{5}{8}$ -in. iron ...
No. 2	For 1 $\frac{1}{2}$ -in. pipe.....
No. 3	For 3 $\frac{3}{4}$ -in. pipe

SPECIAL PIN OR NUT END

Galvanized



Per Hundred
Galv.

No. 15	For 1 $\frac{1}{2}$ -in. pipe.....
No. 4	For 3 $\frac{3}{4}$ -in. pipe.....
No. 14	For 1-in. pipe.....

This fitting is used on slide rod awnings with large projection to prevent corners of awning from being out of line. It is used with our No. 3 or 4 slip T or middle socket. The middle socket fits in place marked A on No. 4 and 14 Pin ends. Use No. 2 and 7 Slip T on No. 15.

PIN OR NUT ENDS

Non-breakable Steel Pins
Galvanized



Wood Front Bar, 2 $\frac{3}{4}$ -inch Shank

Per Hundred
Galv.

- | | |
|-------|--|
| No. 5 | For $\frac{3}{8}$ -in. pipe or $\frac{5}{8}$ -in. iron ... |
| No. 6 | For $\frac{1}{2}$ -in. pipe..... |
| No. 7 | For $\frac{3}{4}$ -in. pipe. |



Wood Front Bar, 4-inch Shank
With Non-breakable Steel Pins

Per Hundred
Galv.

- | | |
|--------|---|
| No. 8 | For $\frac{3}{8}$ -in. pipe or $\frac{5}{8}$ -in. iron .. |
| No. 9 | For $\frac{1}{2}$ -in. pipe..... |
| No. 10 | For $\frac{3}{4}$ -in. pipe. |

PIN OR NUT ENDS

Galvanized

Wood Front Bar, 2 $\frac{3}{4}$ -inch ShankPer Hundred
Galv.

- No. 25 For $\frac{3}{8}$ -in. pipe or $\frac{5}{8}$ -in. iron . .
 No. 26 For $\frac{1}{2}$ -in. pipe
 No. 27 For $\frac{3}{4}$ -in. pipe



Wood Front Bar, 4-inch Shank

Per Hundred
Galv.

- No. 28 For $\frac{3}{8}$ -in. pipe or $\frac{5}{8}$ -in. iron . .
 No. 29 For $\frac{1}{2}$ -in. pipe
 No. 30 For $\frac{3}{4}$ -in. pipe

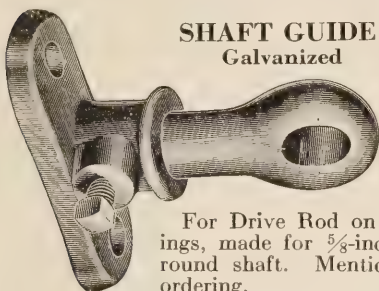
NIPPLES

Galvanized



Diameter Pipe	Length	Per Hundred
$\frac{1}{4}$ "	1"	
$\frac{3}{8}$ "	1"	
$\frac{3}{8}$ "	2"	
$\frac{3}{8}$ "	3"	
$\frac{3}{8}$ "	4"	
$\frac{3}{8}$ "	5"	
$\frac{3}{8}$ "	6"	

Any length made to order



SHAFT GUIDE

Galvanized

For Drive Rod on Roller Awnings, made for $\frac{5}{8}$ -inch or $\frac{3}{4}$ -inch round shaft. Mention size when ordering.

Each

Galvanized.....

This guide is fitted with a bolt that allows an adjustment of from $1\frac{3}{4}$ inches to $5\frac{1}{2}$ inches of the shaft from the face of the building.

EYE BOLTS FOR HEAD RODS

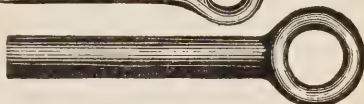
In Stone or Brick

Galvanized

No. 1



No. 2



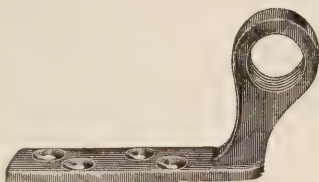
No. 1 5 inches long, with $\frac{9}{16}$ -inch eye for $\frac{1}{2}$ -inch iron head rod.....

No. 2 7 inches long with $\frac{11}{16}$ -inch eye for $\frac{5}{8}$ -inch iron head rod.....

Per Hundred
Galv.

BRACKET FOR UPRIGHTS

For Pipe Columns on Glass Store Fronts



Distance $1\frac{1}{2}$ -in. between building and pipe upright

Per Hundred
Galv.

Fits $\frac{3}{4}$ -inch pipe.....

FALSE POST FIXTURES

Galvanized

POST STUB CLAMPS

Adjustable with Set Screw

With Stub Outlet Threaded for $\frac{3}{8}$ -inch Pipe

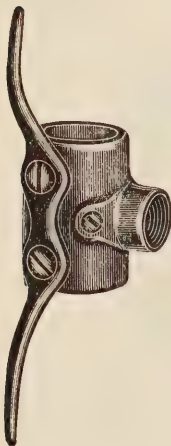


Per Hundred
Galv.

No. 1 For $\frac{3}{4}$ -inch
Pipe Post

No. 2 For 1-inch
Pipe Post

POST STUB CLAMPS



With 6-inch Cleat Attached

Adjustable With Set Screw

With Stub Outlet Threaded
for $\frac{3}{8}$ -inch Pipe

Per Hundred
Galv.

No. 10 For $\frac{3}{4}$ -inch
Pipe Post

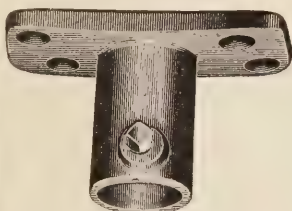
No. 20 For 1-inch
Pipe Post

ADJUSTABLE POST SOCKET

With Set Screws

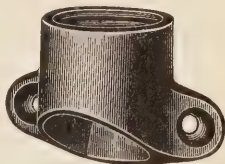
Galvanized

Per Hundred

No. 1
 $\frac{3}{4}$ -in. pipeNo. 2
1-in. pipeBoth sizes allow a
2-inch adjustment**POST STUB ENDS AND SOCKETS**

Galvanized

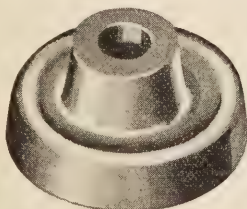
We recommend using the post stub end (threaded) for lower fitting and the post stub socket (not threaded) for the upper fitting on the bar.

Per Hundred
Galv.

- No. 1 For $\frac{3}{4}$ -in. Post Stub End.....
 No. 2 For 1-in. Post Stub End.....
 No. 5 For $\frac{3}{4}$ -in. Post Stub Socket....
 No. 6 For 1-in. Post Stub Socket....

FALSE POST INSERTS

Galvanized



Specially designed for fastening to brick. Center hole accommodates lag screw for fastening. False post column will seat in recessed section of insert. Quickly installed, economical and practical.

Per Hundred
Galv.

- No. 1 For $\frac{3}{4}$ -inch pipe.....
 No. 2 For 1 -inch pipe.....
 No. 3 For 1 $\frac{1}{4}$ -inch pipe.....

Whenever you find a new item of Awning Hardware illustrated in an Astrup Catalog, you are assured that it is offered to you because the resources and the craftsmanship of the entire Astrup organization have thoroughly tested it, and found it worthy of bearing Astrup endorsement.

Astrup Engineers are constantly at work improving and refining the present Astrup line—striving through research to develop new and more efficient features—so that YOU can make finer installations or else, to allow you to reduce your fabrication and installation expense.

When you purchase Astrup Awning Hardware you do so with the knowledge that it is the finest that modern machinery and ingenuity can make.

SECTION V

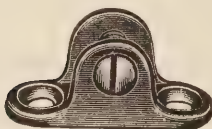
HINGES AND STUBS

Contents

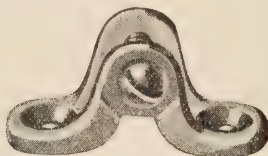
	Page
Brackets, Side Stub.....	143
Ends, Eye, for Automatic Hinges.....	131
Ends, Jaw, with Lag.....	135
Heads for Double Arms.....	143
Hinges, Awning, for Wood and Brick... 130-131- 132-133-134-136-137	
Hinges, Tee.....	140
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Stubs, Drive.....	141
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Stubs, Jaw.....	139-142
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Stubs, Side with Lag.....	135

AWNING HINGES

Camel Back Style
Galvanized
With Machine Screw



No. 0 Projection $\frac{1}{2}$ -inch..... Per Hundred



*No. 1 Projection $\frac{5}{8}$ -inch..... Per Hundred

*No. 2 Projection $\frac{11}{16}$ -inch.....

*Can also be supplied in Polished Brass.



No. 3 Projection $\frac{11}{16}$ -inch..... Per Hundred



No. 11 Projection $\frac{5}{8}$ -inch..... Per Hundred

Similar in design to No. 1 Camel Back Hinge but with round head machine screw having pilot for holding No. 1 Sheet Brass Grommet.

BEVEL BACK HINGE

Galvanized
With Machine Screw
Angle 45 Degrees

Per Hundred.....

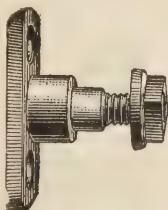
This hinge is made to fit on
 Beaded or Round Window Casings.

**SIDE NUT HINGE**

Galvanized

Per Hundred

Use Large Eye Frame Ends.

**AUTOMATIC HINGE**

Patented

Patent No. 1,526,735

Galvanized

Per Hundred.....

After setting eye end, hinge locks
 automatically.

**EYE ENDS FOR AUTOMATIC
HINGES**

Per Hundred
 Galv.

- No. 106 For $\frac{3}{8}$ -inch iron.....
 No. 107 For $\frac{1}{4}$ -inch pipe or $\frac{1}{2}$ -inch iron
 No. 108 For $\frac{3}{8}$ -inch pipe or $\frac{5}{8}$ -inch iron

These eye ends are made specially for use with
 automatic hinges. When ordering please specify
 by using above numbers.

SIDE COTTER HINGE**Galvanized****Per Hundred**

No. 1 With Galvanized
Cotter Pins

Use Large Eye Frame Ends.

FRONT COTTER HINGE**Galvanized****Per Hundred**

No. 2 With Galvanized
Cotter Pin

Use Large Eye Frame Ends.

**JAW COTTER HINGE****Galvanized****Per Hundred**

No. 0 With Galvanized
Cotter Pin

No. 3 With Galvanized
Cotter Pin

Cotters and hinges are packed
separately.

COTTER HINGES**For Blinds or Shutters****Galvanized****Per Hundred**

No. 4



BOSTON PATTERN HINGES

Galvanized Iron and Machine Bolts



Per Hundred

No. 1 Projection $\frac{5}{8}$ -inch.....No. 2 Projection $\frac{5}{8}$ -inch.....**STAMPED STEEL HINGES**

Galvanized



No. Gauge

Per Hundred

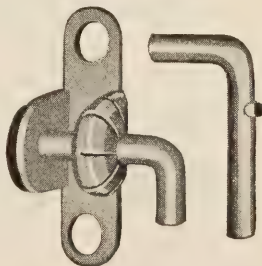
27	20	Extra Light with cotter pins ..
28	20	Extra Light without cotter pins
29	18	Light with cotter pins
30	18	Light without cotter pins.....
31	16	Medium with cotter pins.....
32	16	Medium without cotter pins...
33	14	Heavy with cotter pins.....
34	14	Heavy with machine screw....
35	14	Heavy with stove bolt.....

DOUBLELOCK HINGE

Patent Applied For

The ingenious locking arrangement of the pin, and the hinge, prevents the pin from working loose, even during excessive winds.

This pin always being locked into position cannot be taken out and lost. It is never necessary to make replacements of the pin.

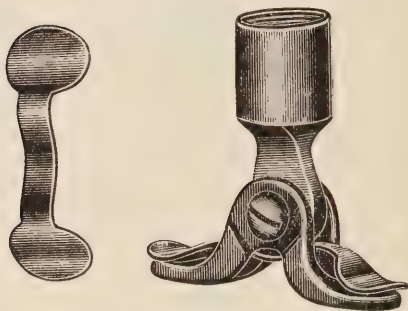


Per Hundred

Doublelock Hinge

HINGE SILENCER SPRING

Galvanized



This silencer is made of fine quality tempered strip steel and will effectively absorb any play between hinge and eye end. *Will positively eliminate noise and rattle.*

Recommended for use with Nos. 1, 2, 3 and 11 Camel Back, Nos. 1 and 2 Boston, No. 3 Jaw Cotter, and Nos. 33, 34 and 35 Large Steel Hinges.

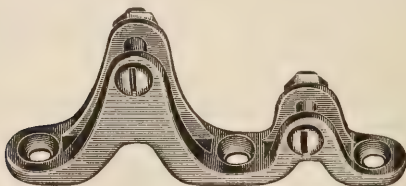
Price per hundred.....

Packed 200 pieces in bag.

TANDEM HINGE

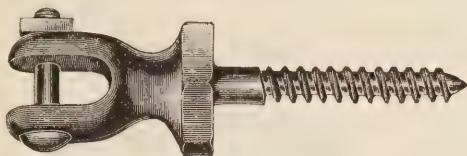
Galvanized

For Hip Roof or Double Frame Awnings



Per Hundred

.....

JAW END WITH LAG SCREW**For Brick
Galvanized****Per Hundred
Galv.**

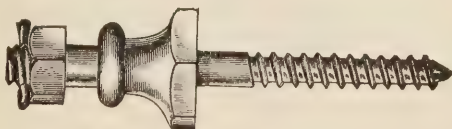
- No. 3** With 1-inch projection, lag screw measures $\frac{1}{4}$ x $1\frac{3}{8}$ inches.....
Intended for use on window and small porch awnings.
Use $\frac{1}{4}$ x $1\frac{1}{2}$ lead screw shields.

**Per Hundred
Galv.**

- No. 4** With $1\frac{1}{2}$ -inch projection.....
Lag screw measures $\frac{3}{8}$ x $2\frac{1}{2}$ inches.
Use $\frac{3}{8}$ x 2-inch lead or malleable expansion shield. For use on ordinary porch and store awnings.

**Per Hundred
Galv.**

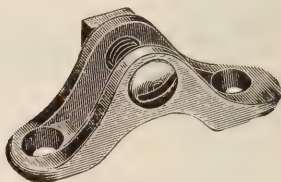
- No. 5** With $1\frac{5}{8}$ -inch projection, lag screw measures $\frac{1}{2}$ x $2\frac{1}{2}$ inches.....
Intended for use on large or heavy awnings where unusual strains are encountered. Also on Spear Head Stationary Frames. Use our $\frac{1}{2}$ -inch lead shield. Jaws are wide enough for 1-inch, $1\frac{1}{4}$ -inch and $1\frac{1}{2}$ -inch Eye Ends. Fitted with cotter rivets or machine bolts.....extra per hundred.

SIDE STUB WITH LAG SCREW**For Brick****Per Hundred****Galvanized.....**

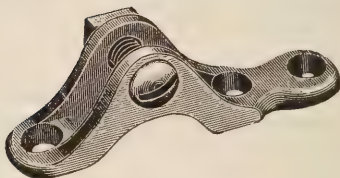
Lag screw measures $\frac{3}{8}$ x $2\frac{1}{2}$ inches.
Use $\frac{3}{8}$ x 2-inch lead or malleable expansion shield.

BRACKET HINGES

Galvanized with Round Head Stove Bolt



No. 0-B



No. 1-B



No. 2-B

Per Hundred
Galv.

No. 0-B With one inch projection . . .

*No. 1-B With one inch projection . . .

No. 2-B With one inch projection. . .

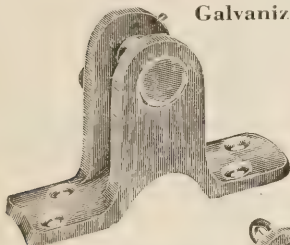
With cotter rivets or machine bolts.
extra per hundred.

*Can also be supplied in Polished Brass.

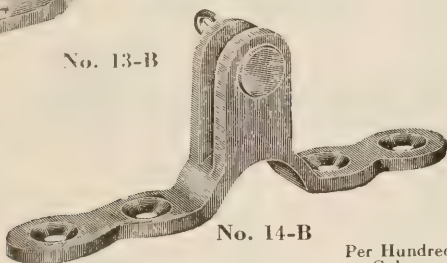
BRACKET HINGES

Fitted with $\frac{3}{8}$ -in. diameter cotter rivet or
machine bolt

Galvanized



No. 13-B



No. 14-B

Per Hundred
Galv.

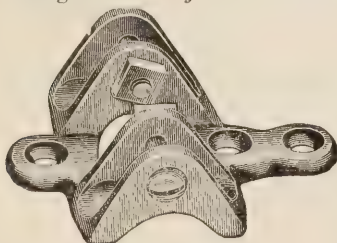
No. 13-B With 2-inch projection.....

No. 14-B With 2-inch projection.....

DOUBLE BRACKET HINGE

Galvanized

With round head stove bolts
Opening between jaws 2 inches



Projection one inch.

Galv.

Per Hundred.....

If ordered fitted with cotter rivets or machine
bolts, \$ extra per hundred.

PLATE STUBS OR PLATE HINGES

Galvanized

With Round Head Stove Bolts

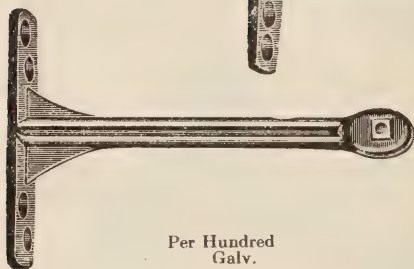
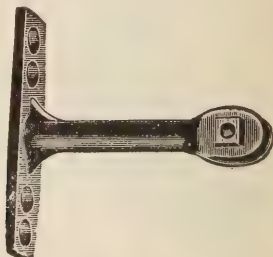
Length Per Hundred Galv.

1 inch

2 inches . . .

3 inches . . .

4 inches . . .



Per Hundred Galv.

Per Hundred Galv.

5 in. long . . .

9 in. long . .

6 in. long . . .

10 in. long . .

7 in. long . . .

11 in. long . .

8 in. long . . .

12 in. long . .

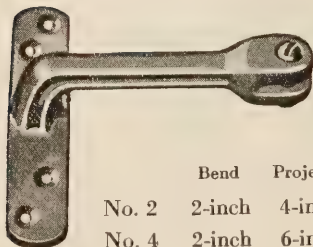
With cotter rivets or machine bolts,
per hundred.

extra

BENT PLATE STUBS OR PLATE HINGES

Galvanized

With Round Head Stove Bolts



Per Hundred Galv.

Bend Projection

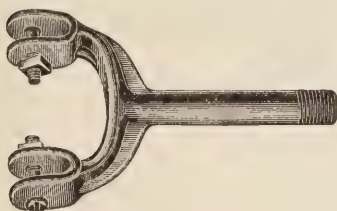
No. 2 2-inch 4-inch

No. 4 2-inch 6-inch

DOUBLE JAW STUB

Galvanized

With round head stove bolts
Opening between jaws 4 inches

 $\frac{3}{8}$ -Inch Pipe Thread

Length of Stub 6-Inch Overall

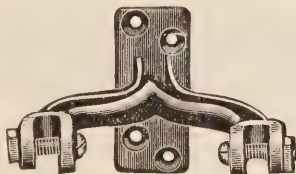
Galv.

Per Hundred

DOUBLE PLATE STUB OR PLATE HINGE

Galvanized

With Round Head Stove Bolts
Opening Between Jaws 4 Inches

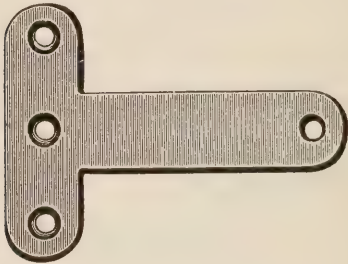


Per Hundred

4 inches projection, galvanized

With cotter rivets or machine bolts, extra
per hundred.

TEE HINGES



Galvanized Wrought Iron

For use in construction of Awnings on buildings of wood.

Furnished in galvanized finish in following sizes:

	Per Hundred
2 in.....	
3 in.....	
4 in.....	
5 in.....	
6 in.....	

EYE STUBS

Eye takes a 3/8-inch diameter Bolt
Galvanized



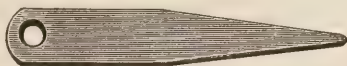
Per Hundred
Galv.

No. 1	With 1-inch projection.....
No. 2	With 2-inch projection.....
No. 3	With 3-inch projection.....
No. 4	With 4-inch projection.....

Above have 5/8-inch diameter shank threaded for 3/8-inch pipe.

BRICK DRIVE STUBS

Galvanized Wrought Iron



FLAT BRICK DRIVE STUBS

Can be used on face side of brick column by driving into vertical seam of brick.

Furnished in galvanized finish.

Price

Hundred.



ANGLE BRICK DRIVE STUBS

When stub is attached to side of brick column, this fitting can be driven into seam of brick.

Furnished in galvanized finish.

Price

Hundred.



TWISTED BRICK DRIVE STUBS

Can be used on face side of brick column by driving into horizontal seam of brick.

Furnished in galvanized finish.

Price

Hundred.

JAW STUBS

Galvanized

For Iron Posts or Columns
With Round Head Stove Bolts



Per Hundred
Galv.

- No. 9 2 inches long, $\frac{5}{8}$ -in. iron shank
 - No. 10 3 inches long, $\frac{5}{8}$ -in. iron shank
 - No. 11 4 inches long, $\frac{5}{8}$ -in. iron shank
 - No. 12 5 inches long, $\frac{5}{8}$ -in. iron shank
 - No. 13 6 inches long, $\frac{5}{8}$ -in. iron shank
 - No. 14 7 inches long, $\frac{5}{8}$ -in. iron shank
 - No. 15 8 inches long, $\frac{5}{8}$ -in. iron shank
 - No. 16 9 inches long, $\frac{5}{8}$ -in. iron shank
- Cut with $\frac{3}{8}$ -inch pipe thread.

With cotter rivets or machine bolts, extra
per hundred

BOLT STUBS

Galvanized

With Round Head Stove Bolts
For Brick or Stone



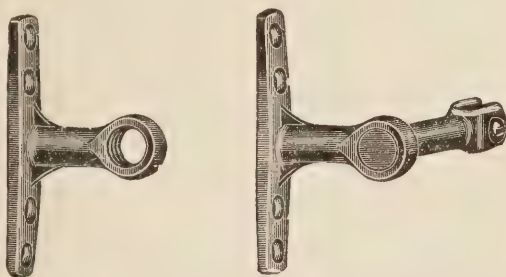
Per Hundred
Galv.

- No. 1 4 inches long, $\frac{5}{8}$ -in. iron shank
- No. 2 5 inches long, $\frac{5}{8}$ -in. iron shank
- No. 3 6 inches long, $\frac{5}{8}$ -in. iron shank
- No. 4 7 inches long, $\frac{5}{8}$ -in. iron shank
- No. 5 8 inches long, $\frac{5}{8}$ -in. iron shank
- No. 6 9 inches long, $\frac{5}{8}$ -in. iron shank

With cotter rivets or machine bolts, extra
per hundred.

SIDE STUB BRACKET

Galvanized



Any length jaw stub can be fitted on this bracket.
See illustration showing completed fitting.

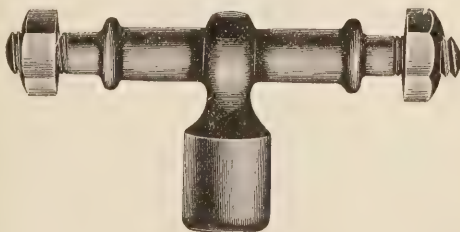
Per Hundred
Galv.

2-inch projection.....

4-inch projection.....

HEADS FOR DOUBLE ARMS

Galvanized



Per Hundred
Galv.

For $\frac{5}{8}$ -inch Iron or $\frac{3}{8}$ -inch Pipe.....

Takes our Frame or Eye Ends with Large Eye.

Each Astrup Branch is a complete unit for servicing of awning supplies in its community. In personnel and spirit it is a community organization with most of its men developed and trained in the local organization and trade customs. In addition, they have the advantage of new ideas and uses for various awning products, as developed in other territories and available from other Astrup Warehouses.

Manufacturers who use the facilities provided by an Astrup Warehouse can extend to their trade that same quick service as though they carried their own stock.

It is our hope that this publication will serve to further emphasize our desire to not only supply you satisfactory Awning Hardware, but that you will accept it as an invitation to call on your Astrup representative for any information which may be helpful to you.

OFFICES AND WAREHOUSES
THE ASTRUP COMPANY

CLEVELAND, OHIO
2937 West 25th St.
Telephone—SHadyside 5000

NEW YORK, N. Y.
39 Walker Street
Telephone—CAnal 6-6444

ST. LOUIS, MO.
1908 Locust Street
Telephone—CEntral 2252

MIAMI, FLA.
742 S. W. Eighth Street
Telephone—2-6042

PACIFIC COAST SALES OFFICE

1118 Mission Street
Telephone No. MArket 4638
San Francisco, Calif.

SECTION VI

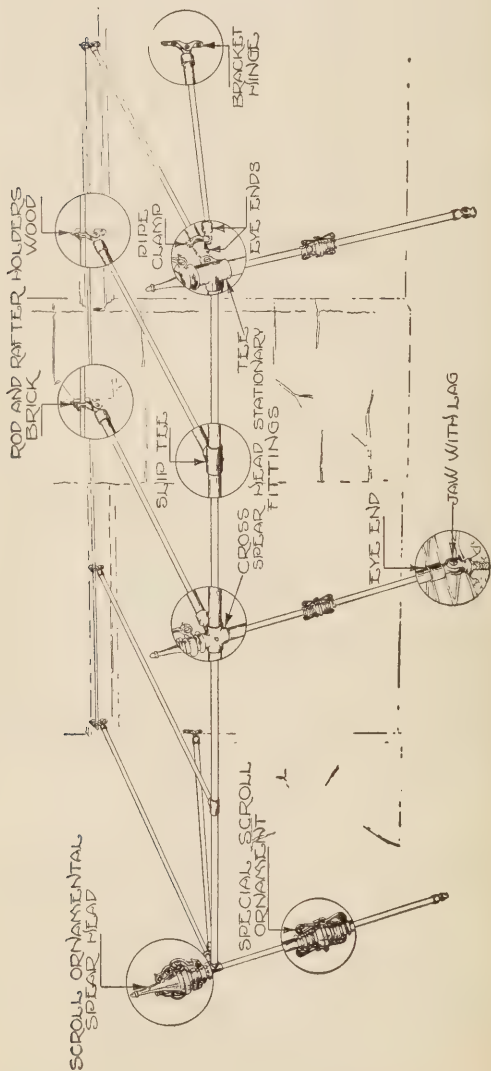
SPEAR HEAD FITTINGS AND
ORNAMENTAL ARMS

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VENETIAN AWNINGS

Spear Stationary Style



VENETIAN AWNINGS

For centuries, the Arabs have used their spears as uprights for their tents. The effect is bizarre, and charming when contrasted with their highly colored tent materials.

From this originates the spear-head type awning so much in vogue. It suggests the Orient with its romance and is particularly adapted, but not limited, to Spanish and Italian architectures.

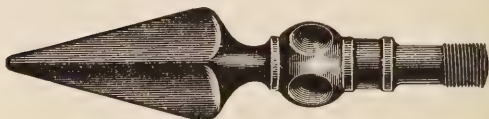
This type of awning is startling and beautiful, and the distinguishing features are, of course, the spears and ornaments.

To attain the best effect, the frame should appear massive; and to be in keeping with the frame, the spears and ornaments likewise must be large. The appearance of many spear-head awnings is often impaired by using too small spears and arm ornaments.

Astrup Spear Heads and Ornaments are designed to faithfully interpret the Orient in this style of awning. They are available in diversified assortment, each adapted to its particular type of architecture, for window, porch or terrace awnings.

SPEAR HEADS

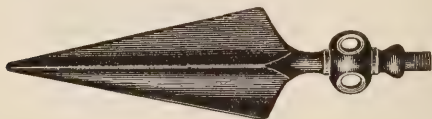
For Venetian Awnings



The 6-inch spear head furnished with $\frac{3}{8}$ -inch pipe thread.

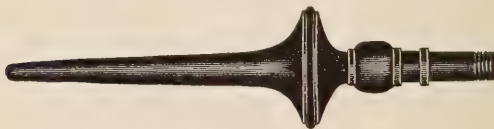
The $9\frac{1}{2}$ -inch and 13-inch spear heads furnished with $\frac{1}{2}$ -inch pipe thread.

			Per Hundred	
			Black	Galv.
No. 1	6	inch.....		
No. 2	$9\frac{1}{2}$	inch.....		
No. 3	13	inch.....		



This 19-inch spear head furnished with $\frac{1}{2}$ -inch pipe thread.

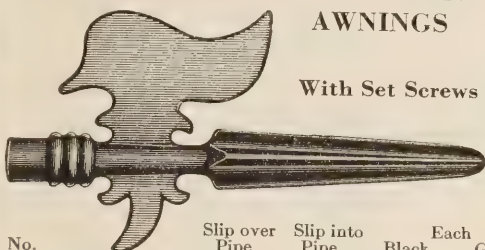
			Per Hundred	
			Black	Galv.
No. 5	19	inch.....		



Furnished with $\frac{1}{2}$ -inch pipe threads.

			Per Hundred	
			Black	Galv.
No. 7	$10\frac{1}{2}$	inch.....		
No. 8	14	inch.....		

BATTLE AX FOR VENETIAN AWNINGS

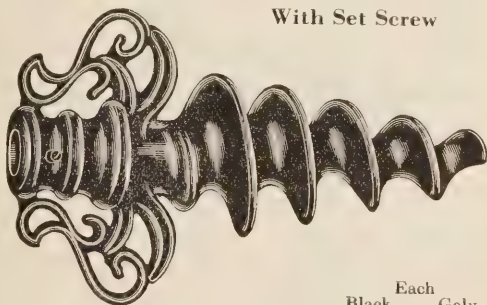


With Set Screws

No.		Slip over Pipe	Slip into Pipe	Each	
				Black	Galv.
13	8½-in. long	⅜-in.	1 -in.		
14	12 -in. long	½-in.	1¼-in.		
15	17½-in. long	¾-in.	1½-in.		

GIMLET POINT SPEAR HEAD

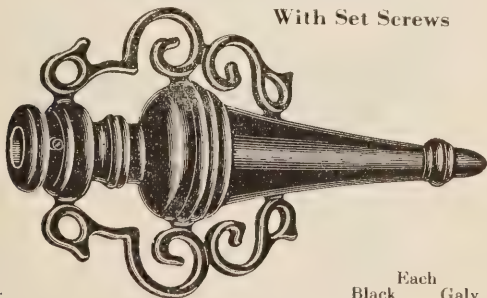
With Set Screw



No.			Each	
			Black	Galv.
16	9 -in. long	slips over ½-in. pipe		
18	14½-in. long	slips over 1 -in. pipe		

SCROLL ORNAMENTAL SPEAR HEAD

With Set Screws

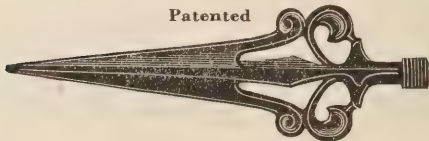


No.			Each	
			Black	Galv.
21	16½-in. long	slips over 1¼-in. pipe		

ORNAMENTAL SPEAR HEADS

For Venetian Awnings

Patented



Patent No. 80995

Furnished with $\frac{1}{2}$ -inch Pipe Threads

		Per Hundred
		Black Galv.
No. 25	9 $\frac{1}{2}$ -inch.....	
No. 26	13 $\frac{1}{2}$ -inch.....	



Patent No. 80994

		Per Hundred
		Black Galv.
No. 28	9 $\frac{1}{2}$ -inch.....	
No. 29	13 $\frac{1}{2}$ -inch.....	

BIRD AWNING DECORATION

For Venetian Awnings

Patent No. 85630



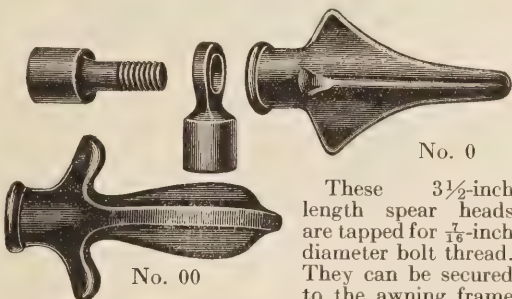
With Set Screw

	Wing Spread	Length	Slip Over Pipe	Each
				Black Galv.
No. 32	10 $\frac{1}{2}$ -in.	6 -in.	$\frac{1}{2}$ -in.	
No. 33	13 $\frac{1}{2}$ -in.	8 $\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.	

SPEAR HEADS FOR VENETIAN AWNINGS

Black and Galvanized

With Female Thread for use with Nut Ends



No. 0

No. 00

These $3\frac{1}{2}$ -inch length spear heads are tapped for $\frac{7}{16}$ -inch diameter bolt thread. They can be secured

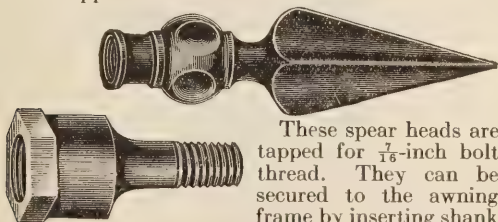
to the awning frame by inserting shank of nut end in tapped section of the spear head for the arm.

The eye end can be slipped over the shank of the pin end for the front bar.

Per Hundred
Black Galv.

No. 0	$3\frac{1}{2}$ -in. spear head....
No. 00	$3\frac{1}{2}$ -in. spear head....
No. 107	$\frac{1}{2}$ -in. iron eye end ..
No. 108	$\frac{5}{8}$ -in. iron eye end ..
No. 70	$\frac{1}{2}$ -in. iron pin end ..
No. 71	$\frac{5}{8}$ -in. iron pin end ..

If sufficient quantities are ordered, spear heads can be tapped for other sizes.



These spear heads are tapped for $\frac{7}{16}$ -inch bolt thread. They can be secured to the awning frame by inserting shank

of nut end in tapped section of spear head.

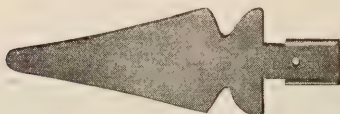
A large eye frame end can be slipped over the shank of the pin end for the front bar.

Per Hundred
Black Galv.

No. 39	5 -inch spear head....
No. 40	$8\frac{1}{2}$ -inch spear head ...
No. 81	$\frac{3}{8}$ -inch pipe nut end .
No. 82	$\frac{1}{2}$ -inch pipe nut end .
No. 83	$\frac{3}{4}$ -inch pipe nut end .

Nos. 1 and 2 Nut Ends can also be used in connection with Nos. 39 and 40 Spear Heads.

STAMPED SPEAR HEAD



This attractive and economical Spear Head made of heavy gauge steel. Can be furnished in Plain (no finish), Duco Black, Cadmium Plate, Hot Galvanized Finish, or special colors if desired. Unless otherwise specified, shipments will be made in Plain (no finish).

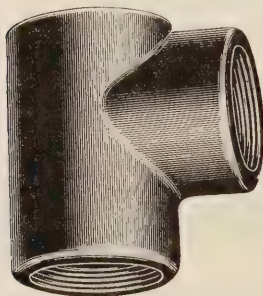
Per Hundred

No. 50 6-inch.....

For use only with $\frac{3}{16}$ x $\frac{3}{4}$ -inch Flat Iron Frames.

SPEAR HEAD TEES

Galvanized

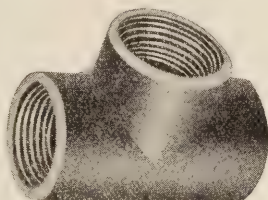


	Arm Outlet	Spear Outlet	Front Bar Outlet	Per Hundred Galv.
No. 1	$\frac{3}{8}$ -in.	$\frac{3}{8}$ -in.	$\frac{3}{8}$ -in...	
No. 2	$\frac{3}{8}$ -in.	$\frac{3}{8}$ -in.	$\frac{1}{2}$ -in...	
No. 3	$\frac{1}{2}$ -in.	$\frac{1}{2}$ -in.	$\frac{1}{2}$ -in...	
No. 4	$\frac{1}{2}$ -in.	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in...	
No. 5	$\frac{3}{4}$ -in.	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in...	

The Spear Point Outlet on these tees will be flush with front bar. When listing the above sizes of spear head tees, we are referring to pipe sizes.

THREE WAY TEES FOR USE WITH VENETIAN OR SPEAR HEAD STATIONARY AWNINGS

Furnished in Galvanized

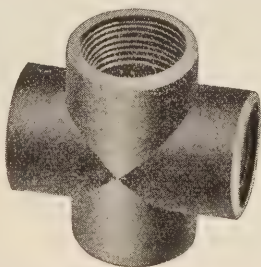


	Arm Outlet	Spear Outlet	Front Bar Outlet	Per Hundred
No. 20	$\frac{3}{4}$ -in.	$\frac{1}{2}$ -in.	1 -in.	
No. 21	$\frac{3}{4}$ -in.	$\frac{3}{4}$ -in.	$\frac{3}{4}$ -in.	
No. 23	1 -in.	$\frac{3}{4}$ -in.	1 -in.	
No. 26	1 -in.	1 -in.	1 -in.	
No. 29	1 $\frac{1}{4}$ -in.	1 $\frac{1}{4}$ -in.	1 $\frac{1}{4}$ -in.	

Can be furnished with set screws extra
per hundred.

FOUR WAY CROSSES FOR USE WITH VENETIAN OR SPEAR HEAD STATIONARY AWNINGS

Furnished in Galvanized

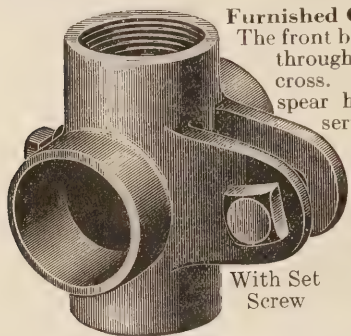


	Arm Outlet	Spear Outlet	Front Bar Outlets Reamed For Slip Fit	Per Hundred
No. 40	$\frac{3}{4}$ -in.	$\frac{3}{4}$ -in.	$\frac{3}{4}$ -in. x $\frac{3}{4}$ -in.	
No. 41	1 -in.	$\frac{3}{4}$ -in.	1 -in. x 1 -in.	
No. 42	1 -in.	1 -in.	1 -in. x 1 -in.	
No. 44	1 $\frac{1}{4}$ -in.	1 $\frac{1}{4}$ -in.	1 $\frac{1}{4}$ -in. x 1 $\frac{1}{4}$ -in.	

Can be furnished with set screws extra
per hundred.

Other size crosses can be furnished on request.

SPEAR HEAD STATIONARY FITTINGS



Furnished Galvanized

The front bar can be slipped through the run of the cross. The arm and spear heads can be inserted in their respective outlets. A hinge has been placed on the Cross so that rafters can be placed from the front bar to the head of the awning.

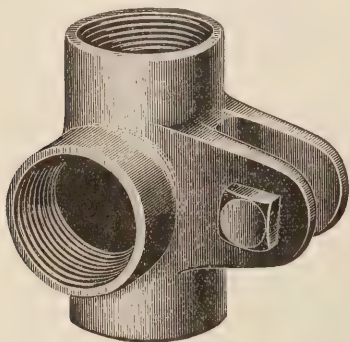
With Set
Screw

Each

No. 60 $\frac{3}{4}$ -inch pipe cross all outlets..

No. 61 1 -inch pipe cross all outlets..

No. 62 $1\frac{1}{4}$ -inch pipe cross all outlets..



Tees are threaded for ends of front bar. The arm and spear head can be threaded in the run outlet of tee.

A hinge has been placed on the tee so that rafters can be placed from the front bar to the head of the awning.

Each

No. 70 $\frac{3}{4}$ -inch pipe tee all outlets....

No. 71 1 -inch pipe tee all outlets....

No. 72 $1\frac{1}{4}$ -inch pipe tee all outlets....

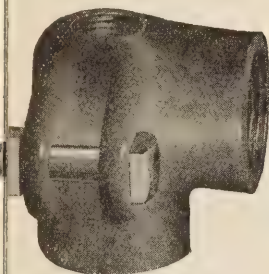
Galvanized Bushings with in and outside thread can be furnished in following sizes to reduce outlets on stationary fittings.

Per Hundred

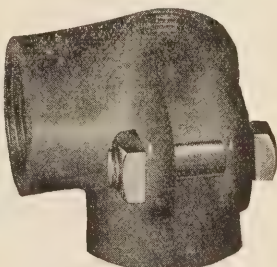
$\frac{1}{2}$ x $\frac{3}{4}$ -inch pipe.....	
$\frac{1}{2}$ x 1 -inch pipe.....	
$\frac{1}{2}$ x $1\frac{1}{4}$ -inch pipe.....	
$\frac{3}{4}$ x 1 -inch pipe.....	
$\frac{3}{4}$ x $1\frac{1}{4}$ -inch pipe.....	
1 x $1\frac{1}{4}$ -inch pipe.....	

SPEAR HEAD STATIONARY FITTINGS

Furnished Galvanized



No. 50 Left Elbows



No. 51 Right Elbows

Front bar and post outlets tapped for 1-inch pipe. Spear Head outlet is flush with front bar and is tapped for $\frac{1}{2}$ -inch pipe.

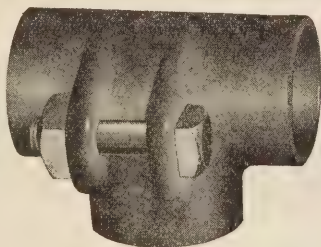
These fittings can also be used on regular stationary awnings, that is, without Spear Heads, for, as mentioned, the spear outlet is flush with front bar.

A hinge has been placed on the elbows so that rafters can be placed from the front bar to the head of the awning.

Each

No. 50 Left Elbow.....

No. 51 Right Elbow.....



No. 76 Tees

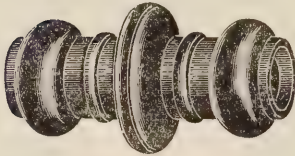
A 1-inch pipe front bar can be slipped through the run of the Tee. The post outlet is tapped for 1-inch pipe. A hinge has been placed on the Tee so that rafters can be placed from the front bar to the head of the awning.

Each

No. 76 Tees.....

ORNAMENTS FOR VENETIAN AWNING ARMS

With Set Screw



These ornaments are constructed to slip over $\frac{3}{8}$ -inch, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch pipe arm.

	Per Hundred
	Black Galv.

- No. 1 Slips over $\frac{3}{8}$ -in. pipe,
4 in. long
- No. 2 Slips over $\frac{1}{2}$ -in. pipe,
5 in. long
- No. 3 Slips over $\frac{3}{4}$ -in. pipe,
5 in. long

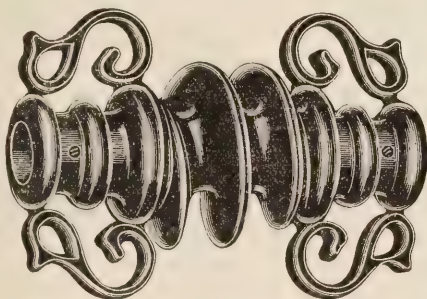


	Each
	Black Galv

- No. 6 Slips over 1-in. pipe
arm, $7\frac{3}{4}$ -in. long
- No. 7 Slips over $1\frac{1}{4}$ -in. pipe
arm, 9-in. long

SPIRAL ORNAMENTS

With Set Screws

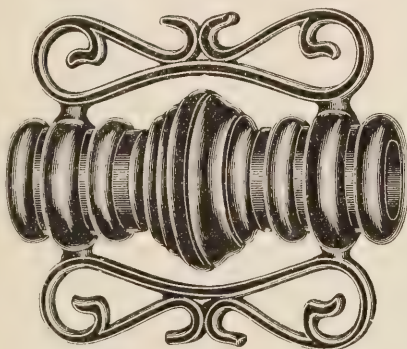


Black Each Galv

No. 15 Slips over 1-in. pipe
arm, 9-in. long.....

SPECIAL SCROLL ORNAMENT

With Set Screws



Black Each Galv.

No. 21 Slips over 1¼-in. pipe
arm, 9-in. long.....

No. 22 Slips over 1½-in. pipe
arm, 9-in. long.....

AJAX ORNAMENTAL WROUGHT IRON ARMS



These attractive arms are inexpensive and are extensively used. Awnings equipped with these arms can be raised or lowered, as intended, and are recommended to be fastened to the building with a No. 50 Rosette Hinge to present the most finished appearance.

Furnished only in following lengths and finishes:

	Black Painted Each	Galv. Finish Each	Black Painted over Galv. Finish Each
--	--------------------------	-------------------------	--

- | | | | |
|--------|------------------|--|--|
| No. 2 | 2 ft. long.. | | |
| No. 2½ | 2 ft. 6 in. long | | |
| No. 3 | 3 ft. long.. | | |

The following arms are made of slightly heavier stock than the above arms to accommodate porch and large window awnings.

- | | |
|--------|---------------------|
| No. 10 | 3 ft. 6 in. long .. |
| No. 11 | 4 ft. long..... |
| No. 12 | 4 ft. 6 in. long .. |
| No. 13 | 5 ft. long..... |

Standard package 6 pieces of a size. Extra charge when purchased in less than that quantity.

Front rods should be of $\frac{3}{8}$ -inch, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch pipe with either our Nos. 55, 56 or 57 pin ends respectively attached, as illustrated on page 161.

To attach the front rod to the arms, remove rosette nuts from the pin ends and place pin through end of scroll, then tighten front rod to arm with the nut.

Unless otherwise specified ornamental arms will be furnished in plain black painted finish. We can, however, furnish them in plain galvanized finish and can also furnish them black painted over galvanized. Special prices prevail on finishes other than plain black painted. When ordering, *please specify style number and finish.*

PARAMOUNT ORNAMENTAL WROUGHT IRON ARMS



This style arm has been designed to meet the exacting demands of particular buyers. It is original in appearance and beautifully designed. Made of heavier steel than Ajax Arm making arm stronger, more massive in appearance and scroll sections more prominent.

Furnished only in following lengths and finishes:

		Black Painted Each	Galv. Finish Each	Black Painted over Galv. Finish Each
No. 23	2 ft. long.....			
No. 24	2 ft. 6 in. long ..			
No. 25	3 ft. long.....			
No. 26	3 ft. 6 in. long ..			
No. 27	4 ft. long.....			
No. 28	4 ft. 6 in. long ..			
No. 29	5 ft. long.....			

Standard package 6 pieces of a size. Extra charge when purchased in less than that quantity.

Front rods on above arms can be of $\frac{3}{8}$ -inch, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch pipe by using rosette pin ends Nos. 51, 52 or 53 respectively as illustrated on page 161.

The No. 50 rosette hinge is made specially to fit hinge connections on this arm.

Unless otherwise specified ornamental arms will be furnished in plain black painted finish. We can, however, furnish them in plain galvanized finish and can also furnish them in black painted over galvanized. Special prices prevail on finishes other than plain black painted. When ordering, *please specify style number and finish.*

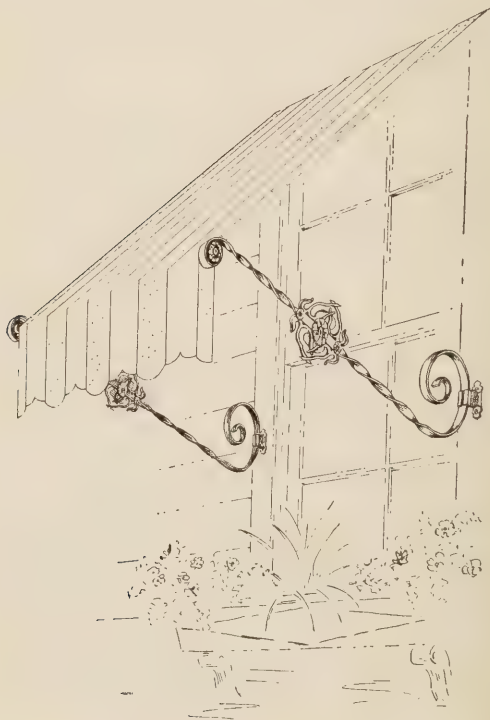
Always use rosette hinge and pin end when erecting the Paramount Arm, for they are specially made to fit this style arm and will greatly improve appearance of awning.

ASTRUP ORNAMENTAL WROUGHT IRON ARMS

Awnings, while attractive and beautiful, at times require additional ornamentation, so that the complete installation is in perfect harmony.

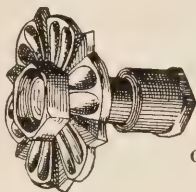
For that reason Astrup Ornamental Arms were designed. The arms will "tone" or "dress-up" any awning.

Below is a sketch of an awning showing the proper method of installing Astrup Ornamental Arms. It is suggested that Rosette Pin Ends and Hinges be used with Ornamental Arms to produce a harmonious effect.



ROSETTE DESIGNED HINGES AND PIN ENDS FOR ORNAMENTAL ARMS

Rosette Pin Ends



Per Hundred

Black
Rustproof
Finish

Galv.

Pin Ends for Paramount Arms

No. 51 $\frac{3}{8}$ -inch pipe

No. 52 $\frac{1}{2}$ -inch pipe

No. 53 $\frac{3}{4}$ -inch pipe

Pin Ends for Ajax Arms

No. 55 $\frac{3}{8}$ -inch pipe

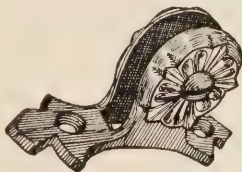
No. 56 $\frac{1}{2}$ -inch pipe

No. 57 $\frac{3}{4}$ -inch pipe

ATTENTION

When ordering, be sure to specify pin ends for correct style of arm they are to fit.

Rosette Hinge



Per Hundred

Black
Rustproof
Finish

Galv.

No. 50 Rosette Hinge for
all sizes Ajax and Paramount Arms.

CANOPIES ARE POPULAR

Canopies are a mark of distinction. They impart to the building an impression of dignity and refinement that is distinctly favorable.

This fact is being recognized by clubs, restaurants, specialty shops, department stores, automobile show rooms, and other similar institutions. They are adopting canopies because they find that canopies attract attention most desirably.

Furthermore, patrons and customers of these institutions are offered protection from the weather by canopies. Thus, canopies serve a two-fold purpose.

The street canopy is probably the most popular. It must be ruggedly built to eliminate hazards to pedestrians.

Astrup Canopy Fittings are of pleasing design, strong and well finished. They permit canopies to be quickly assembled and dismantled, and they do not in any way detract from the appearance of the canopy cover.

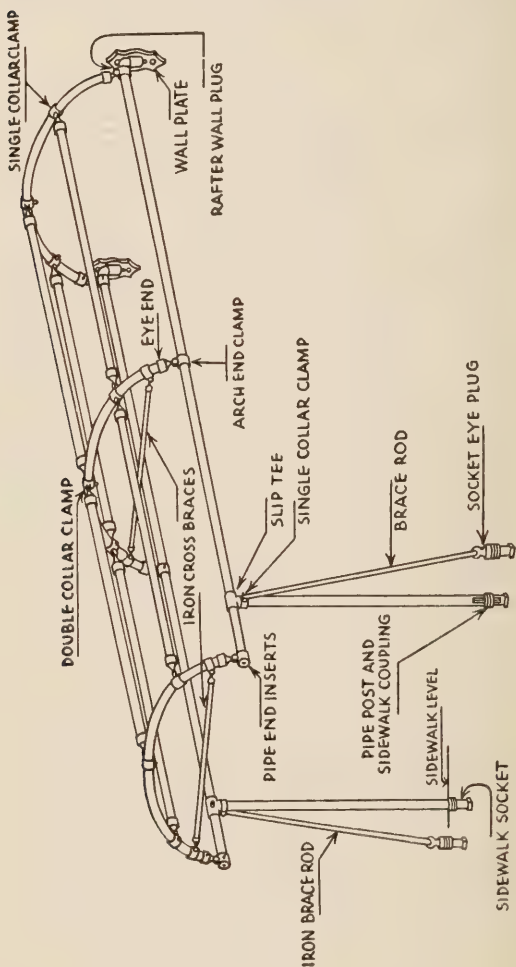
Write for special circular and any information you desire as to proper fittings and pipe to use in construction of canopies.

SECTION VII

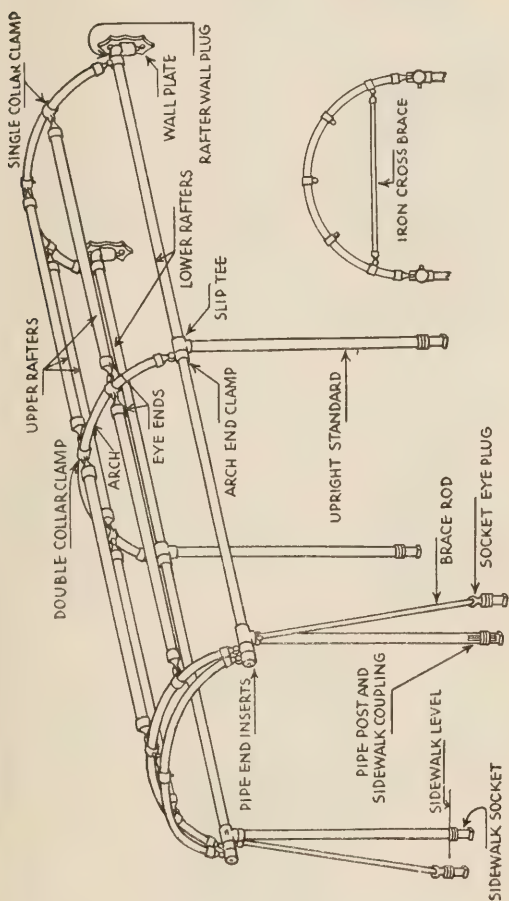
CANOPY FITTINGS

Contents

	Page
Clamp, Arch End	168
Clamp, Double Collar	168
Clamp, Single Collar	167
Coupling, Pipe Post and Sidewalk	167
End, Acorn Plug	169
End, Frame or Eye	170
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Plug, Rafter Wall	170
Plug, Socket	166
Plug, Socket Eye	166
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Tees, Slip	169



The above drawing illustrates a "square end" canopy made with Astrup Canopy Fittings. Fittings listed are more thoroughly described and illustrated on pages following.



The above drawing illustrates a "hood" canopy made with Astrup Canopy Fittings. Fittings listed are more thoroughly described and illustrated on pages following.

SIDEWALK CANOPY FITTINGS



BRASS SIDEWALK
SOCKET
No. 80

Slip fit for 3/4-in. pipe upright standard and all plug insertions.
Total length overall of sidewalk socket not including eye, 3 1/8 inches.

Each.....



BRASS SOCKET
EYE PLUG
No. 81

Slips into sidewalk socket at lower end of brace rod.

Each.....

BRASS SOCKET PLUG
No. 82



Slips into sidewalk socket when canopy is removed. To prevent dirt and refuse collecting in socket. Can be removed from socket by inserting screw driver in slotted hole.

Each.....

SIDEWALK CANOPY FITTINGS

MALLEABLE IRON PIPE POST AND SIDEWALK COUPLING

The lower section slips into the sidewalk socket and the upper section slips into pipe for pipe upright standard.

Each

No. 83 Slips into 1-inch pipe post upright standard . .

No. 84 Slips into 1 1/4-inch pipe post upright standard . .

3/4-inch pipe can be slipped into sidewalk socket and therefore a 3/4-inch pipe sidewalk coupling is not necessary.



SINGLE COLLAR CLAMPS

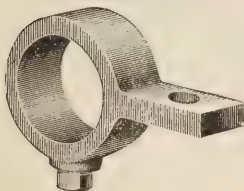
Galvanized Malleable Iron with Set Screw

Per Hundred

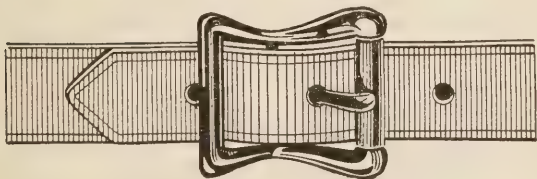
No. 85 Slips over 3/4-inch pipe . . .

No. 86 Slips over 1-inch pipe

No. 87 Slips over 1 1/4-inch pipe . .



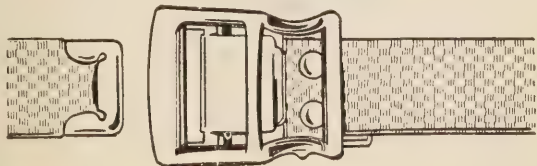
CANOPY STRAPS



LEATHER CANOPY STRAP

Price Each

7/8-inch width, 16-inch length



WEB CANOPY STRAP

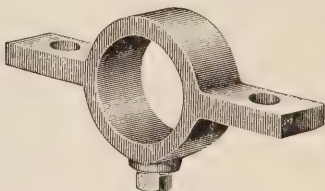
Price Each

1 inch width, 17-inch length

SIDEWALK CANOPY FITTINGS

DOUBLE COLLAR CLAMPS

Galvanized Malleable Iron with Set Screw



Per
Hundred

- | | |
|--------|--|
| No. 88 | Slips over $\frac{3}{4}$ -inch pipe |
| No. 89 | Slips over 1-inch pipe |
| No. 90 | Slips over $1\frac{1}{4}$ -inch pipe |



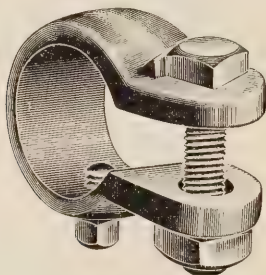
Per
Hundred

- | | |
|---------|---|
| No. 188 | Slips over $\frac{3}{4}$ -inch pipe |
| No. 189 | Slips over 1-inch pipe |

Holes for upper rafters drilled for $\frac{3}{8}$ -inch machine bolt.

ARCH END CLAMPS

With Set Screw and $\frac{3}{8}$ -inch Machine Bolt
Galvanized Malleable Iron



Per Hundred

- | | |
|--------|--|
| No. 91 | Slips over $\frac{3}{4}$ -inch pipe |
| No. 92 | Slips over 1-inch pipe |
| No. 93 | Slips over $1\frac{1}{4}$ -inch pipe |

SIDEWALK CANOPY FITTINGS

ACORN PLUG ENDS

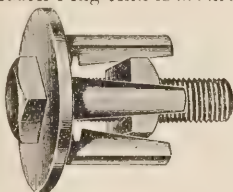
for lower rafters
Galvanized



Per
Hundred

- No. 10 Slips into $\frac{3}{4}$ -inch pipe.....
 No. 11 Slips into 1-inch pipe.....
 No. 12 Slips into $1\frac{1}{4}$ -inch pipe.....

By tightening the Acorn Plug End, using wrench on hex section so designed, the jaws expand, and the Acorn Plug End is securely locked into position.



PIPE END INSERTS

Galvanized

By tightening the bolt the jaws expand and the pipe end insert is securely locked into position.

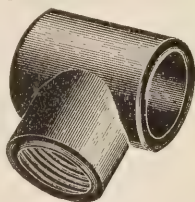
Per Hundred

- No. 94 Slips into $\frac{3}{4}$ -inch pipe.....
 No. 95 Slips into 1-inch pipe.....
 No. 96 Slips into $1\frac{1}{4}$ -inch pipe.....

SLIP TEES

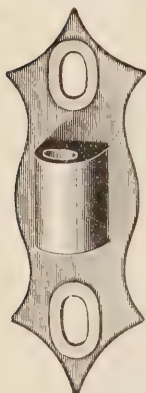
With Set Screw

Galv. Malleable Iron



	Slip	Extension	Per Hundred
No. 4	$\frac{3}{4}$ -inch pipe x	$\frac{3}{4}$ -inch pipe..	
No. 5	1-inch pipe x	$\frac{3}{4}$ -inch pipe..	
No. 6	1-inch pipe x	1-inch pipe..	
No. 8	$1\frac{1}{4}$ -inch pipe x	1-inch pipe..	
No. 9	$1\frac{1}{4}$ -inch pipe x	$1\frac{1}{4}$ -inch pipe..	
No. 10	$1\frac{1}{2}$ -inch pipe x	$1\frac{1}{4}$ -inch pipe..	

SIDEWALK CANOPY FITTINGS



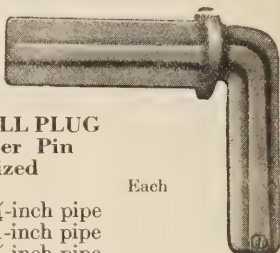
WALL PLATE

Galvanized Malleable Iron

No. 97

Extension center of hole
 $1\frac{1}{4}$ inch.

Each



RAFTER WALL PLUG

With Cotter Pin
Galvanized

Each

No. 98 Slips into $\frac{3}{4}$ -inch pipe

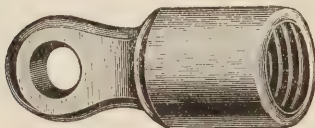
No. 99 Slips into 1-inch pipe

No. 100 Slips into $1\frac{1}{4}$ -inch pipe

Fits into socket of No. 97 Wall Plate.

FRAME OR EYE END

Galvanized Malleable Iron



Per Hundred

No. 104 For $\frac{1}{2}$ -inch pipeNo. 105 For $\frac{3}{4}$ -inch pipe

No. 112 For 1-inch pipe

No. 113 For $1\frac{1}{4}$ -inch pipeNo. 114 For $1\frac{1}{2}$ -inch pipe

Write us for information on portable canopies.

SECTION VIII

AWNING IRON, LADDERS AND
FRAME TOOLS

Contents

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AWNING IRON

Not enough consideration is given to the value of good material for awning frames. The trouble is, the frame is looked upon merely as an accessory. The fact is, it is the permanent part of the job and outlasts many covers.

Common grades of iron are entirely unsuitable for making awning frames. They have not the necessary flexibility, therefore are hard to work into shape. They are not strong enough, which coupled with lack of flexibility, causes them to break easily.

Furthermore, common iron is not finished to resist the weather. It has to be painted and painting does not effectively fill the "pores" so that the iron will successfully resist corrosion.

Astrup Awning Iron is rolled to a special analysis so that it can be bent at right angles without breaking. It is rust-proofed in the Hot Galvanize finish which has been found, by test, the best rust-preventative coating to withstand the weather elements.

And best of all, Astrup Awning Iron, inexpensive in the first place, is actually cheaper because of the trouble it saves and of its greater durability.

SPECIAL GALVANIZED IRON FOR AWNING FRAMES

This iron is manufactured to meet the requirements of the awning trade.

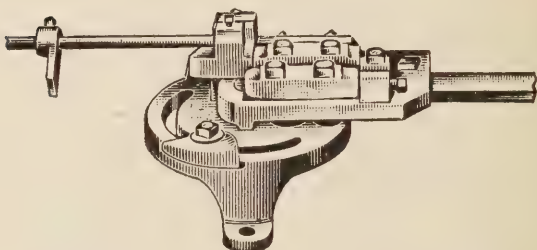
This iron will bend cold at right angles without breaking, peeling or cracking.

The hot process of galvanizing on our brand of iron is far superior to any electro process known. It leaves our rods free from all lumps, burrs or rough spots, and as for the rust, we have tested it for a number of years and find rods in good condition, so we feel we can now offer it to the trade with confidence that it will withstand the elements

Diameters	Lengths	Weight per foot	Weight per bundle
$\frac{3}{8}$ inch round	12 & 18 ft.	6 oz.	91 lbs.
$\frac{1}{2}$ inch round	16 & 18 ft.	10 oz.	123 lbs.
$\frac{5}{8}$ inch round	16 & 18 ft.	1 lb. 2 oz.	200 lbs.
$\frac{3}{4}$ inch round	20 ft.	1 lb. 8 oz.	150 lbs.
$\frac{1}{2}$ inch square	18 ft.	14 oz.	80 lbs.
$\frac{5}{8}$ inch square	18 ft.	1 lb. 4 oz.	120 lbs.

Write for net prices.

FRAME BENDERS

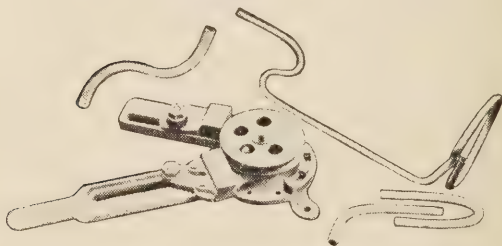


This machine is adapted for bending to any angle round or square iron. The advantages in using our benders are that it makes a true short bend, thus insuring uniformity of all frames, and saves a large amount of time over the old way. Fitted with stop gauges which insure accuracy and perfect uniformity on duplicate parts or frames.

Each

No. 1-A Bender with regular dies for bending rounds and squares up to $\frac{5}{8}$ -inch.....

PIPE AND ROD BENDER



Built primarily for bending awning frames where either pipe or rod enter into construction, avoiding time and expense of threading and fittings for frames.

This machine is offered with standard equipment for cold bending $\frac{1}{2}$ -inch pipe to 1-inch radius, $\frac{3}{4}$ -inch pipe to $1\frac{1}{2}$ -inch radius, and $\frac{3}{8}$ -inch and $\frac{1}{2}$ -inch rods to $\frac{3}{8}$ -inch radius. Prices on special forms quoted on application.

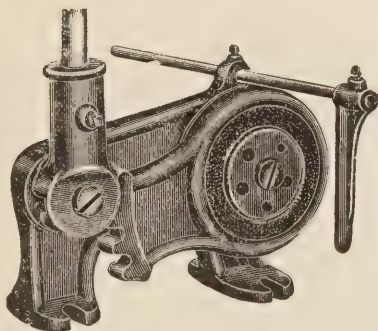
Gauges insure duplicate bends and avoid laying off stock.

Each

No. 2 Bender, with standard equipment outlined above.....

MARVEL ROD CUTTER

THREE SIZES



A NECESSITY IN EVERY SHOP

Cutting Dies have round openings of correct size to cut off rods and wire within the capacity of the machine, which insures good work with ends round and true.

The Marvel Rod Cutter is so arranged as to bring the lever at a convenient height from the bench, and the gearing is so placed as to remove all danger of crushing the operator's hand. The round Steel Lever can be instantly removed when desired.

The center of leverage is down low which lessens the pull on the bench. The neat Gauge is very handy when cutting a number of pieces of the same length.

No. 5. Cuts Rods $\frac{3}{8}$, $\frac{5}{16}$, $\frac{1}{4}$, $\frac{3}{16}$, $\frac{1}{8}$ in. and intermediate sizes. Weight, 12 lbs.

Price complete with Lever, Gauge and Gauge Rod.....

No. 6. Cuts Rods $\frac{5}{8}$, $\frac{9}{16}$, $\frac{1}{2}$, $\frac{7}{16}$, $\frac{3}{8}$ in. and intermediate sizes. Weight 35 lbs.

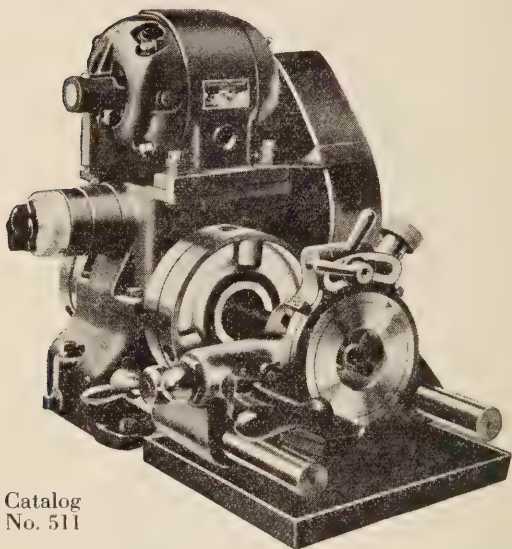
Price complete with Lever, Gauge and Gauge Rod.....

No. 7. Cuts Rods $\frac{7}{8}$, $\frac{3}{4}$, $\frac{5}{8}$, $\frac{1}{2}$, $\frac{3}{8}$ in. and intermediate sizes. Weight, 95 lbs.

Price complete with Lever, Gauge and Gauge Rod.....

OSTER "TOM THUMB"

Pipe and Rod Threader



Catalog
No. 511

Capacity $\frac{1}{4}$ to $1\frac{1}{4}$ Pipe— $\frac{3}{8}$ to $1\frac{1}{4}$ -inch Rods.

Because its capacity covers the exact range of sizes used by the average awning manufacturer, the Tom Thumb machine is ideally suited for this class of work. Its production speed makes it possible to cut threads for awning frames at a very decided saving over hand labor.

Although unusually low in price the Tom Thumb is extremely well built and able to withstand the hardest kind of use over a long period of years.

Driving power is furnished by a Universal Motor which operates from an ordinary light socket.

Price complete with pipe cut-off and dies for $\frac{1}{4}$ to $1\frac{1}{4}$ -inch pipe dies, less Oil Pump and base.....

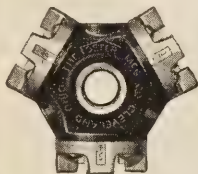
Extra for $\frac{1}{8}$ -inch pipe dies.....

Extra for Automatic Oil Pump, with base and reservoir to insure positive flow of oil to dies.....

Write for Descriptive Circular

OSTER "CHIP CHASER"

Stocks and Dies



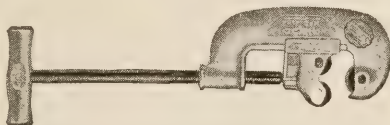
No. 000
Capacity $\frac{3}{8}$ to $\frac{3}{4}$ "
Pipe

Handling the three sizes used mostly by awning manufacturers, without changing dies, these tools save a great deal of time on jobs where several different sizes are threaded. The tools are perfectly balanced to handle well on any sizes and they start and cut very easily.

Price complete with Dies $\frac{3}{8}$ to $\frac{3}{4}$ inch. . .

Extra Dies per set.

PIPE CUTTER



This Pipe Cutter is very strong and cuts off pipe with little effort.

No. 2 Range $\frac{1}{8}$ in. to 2 in., price complete.

HINGED PIPE VISE



This Pipe Vise is the quickest action and strongest vise made today. One piece slide holds upper jaw permanently in place—this jaw cannot be lost. Unconditionally guaranteed.

Specifications

No. 2 Range $\frac{1}{8}$ -inch to 2-inch pipe, price

COMBINATION BENCH and PIPE VISE

With Anvil Horn and Cut-Off Tool and Swivel Base

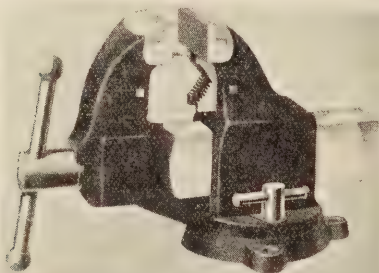


This vise is specially adapted for awning work. It is strong—durable—inexpensive. Particularly advantageous for installation on trucks, when repairs are made on job. It has removable pipe jaws for holding pipe or round iron, hardened steel jaw faces, which may be removed when chipped or worn; cold rolled screw with positive locking split steel collar; steel sliding bar and steel handle.

Vise No.	Width Jaw	Jaws Open	Holds Pipe	Weight	Each
43	3"	3½"	¼-1¼"	14 lbs.	—

COMBINATION BENCH and PIPE VISE

With Swivel Base



This vise is specially adapted for frame room use. It is a vise that is big and strong enough to handle all classes of awning frame work. Made of malleable iron with replaceable tool steel jaw faces, with the added convenience of removable pipe jaws. Proper heat treatment of the jaws to secure correct hardness and toughness insures long service.

Vise No.	Width Jaw	Jaws Open	Holds Pipe	Weight	Each
203½	3½"	4"	⅛-2½"	35 lbs.	—

CHANNELLOCK PLIERS

Polished Steel



The tongue and groove Channellock joint of this plier provides a vise-like grip entirely independent of the gripping power of the user's hand. The most stubborn nut or pipe can be easily turned. Every awning mechanic should have one. Made of high grade alloy steel, this plier will stand any strain imposed on it. It will give a positive grip on anything inserted between its jaws from $\frac{3}{16}$ inch to $1\frac{1}{8}$ inches.

No. 410 Pliers.....each

STILLSON PIPE WRENCH



Size Inches	Capacity Pipe	Each
10.....	$\frac{1}{8}$ to 1.....	
14.....	$\frac{1}{4}$ to $1\frac{1}{2}$	
18.....	$\frac{1}{4}$ to 2.....	

The pliers and wrenches described above are not guaranteed against breakage due to overload. They are only guaranteed against breakage due to defective material or faulty workmanship.

BLACK & DECKER

“SHORTY” ELECTRIC DRILLS

With Right Angle Head



An entirely new unit that combines ample power, compact design, light weight and the ability to “work around corners.”

The “Shorty” drill has been specially designed for “close corner” work, where size and weight are important considerations. It is indispensable and a necessity for the proper drilling of holes for operating mechanism in recess boxes.

The chuck spindle is mounted at right angles to the motor, thereby reducing the overall *working* length of the tool to 4½-inches. The tool fits snugly into the operator’s hand, and extra handles or hand-grips are not required.

The motor is air cooled, and the unit is ball bearing equipped throughout. It will operate either on A.C. or D.C. A thumb control switch is in the line just back of the tool.

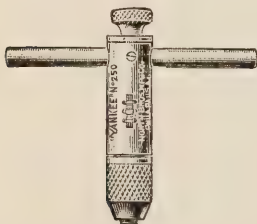
It has a capacity of ¼-inch in steel, and is supplied complete with cable, plug, and three-jaw geared chuck.

Weight, 3½ lbs.

When ordering, please specify voltage required.

Price, each

“YANKEE” RATCHET TAP WRENCH



This ratchet tap wrench is adaptable, convenient and efficient for working in close quarters, corners and inaccessible places. It is ideally suited for recess box work.

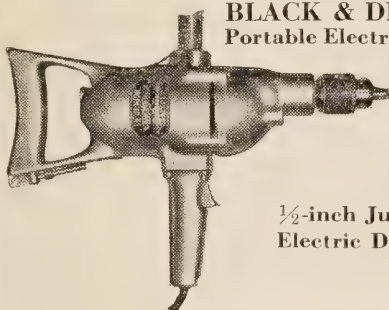
The ratchet mechanism is the same as used in other “Yankee” tools, and makes the tool either

left hand, right hand or rigid as an ordinary tap wrench.

The chuck has hardened steel jaws.

Each

No. 251 Ratchet Tap Wrench, holds ⅛" to ⅝" Taps, ⅞-inch outside diameter of chuck, and 5-inches long overall.....



BLACK & DECKER Portable Electric Drills

1/2-inch Junior Electric Drill

This drill has a capacity of 1/2-inch in Steel, Iron or Wood. It is equipped with a Universal Motor operating efficiently on either A. C. or D. C. Current, and can be furnished for 110 or 220 Volts. It can be fitted with a Drill Stand making a combination outfit for work in the frame room or for outside work. Complete with cable, plug, and three-jaw, geared chuck.

Weight 13 1/2 lbs.

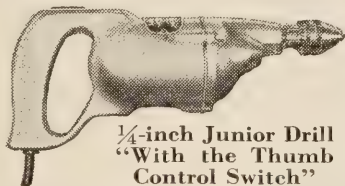
Please specify when ordering the voltage required.

Each

Price, Drill only

Price, Drill Stand only

BLACK & DECKER PORTABLE ELECTRIC DRILLS



1/4-inch Junior Drill "With the Thumb Control Switch"

The modern streamline designing improves the balance of the tool. This drill has a capacity of 1/4 inch in steel. It is equipped with a Universal Motor operating efficiently on either A. C. or D. C. current, and can be furnished for 110 or 220 volts. Complete with cable, plug, and three-jaw, geared chuck.

Weight 4 1/2 lbs.

Please specify when ordering the voltage required.

Price, each

RIGHT ANGLE DRILLING ATTACHMENT

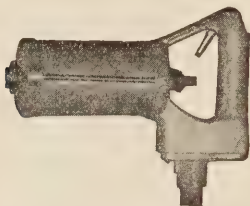
This attachment will permit drilling of holes in ceilings of recess boxes, and all hard-to-get-at places. It is ruggedly constructed and equipped with a 3-jaw, geared chuck, with $\frac{1}{2}$ " capacity. Will fit the $\frac{1}{2}$ " Junior Black & Decker Drill only.

Each

Right Angle Drilling Attachment

SYNTRON ELECTRIC HAMMERS

Only One Moving Part—The Piston



For drilling in concrete, brick or stone.

Hammers will operate from any 110 volt, 60 cycle alternating current and strikes 3,600 blows per minute.

The Type 8 Hammer will drill holes up to $\frac{1}{2}$ -inch diameter. It weighs 8 pounds. Length $9\frac{3}{4}$ -inches.

The Type MK Hammer will drill holes up to $\frac{5}{8}$ -inch diameter. It weighs only 9 pounds. Length, 12 inches.

Both tools highly efficient and practical for awning work, small in size, light in weight and easy to handle.

A complete unit consists of Hammer, Controller, 10-foot Extension Line, Drill Chuck, Drift Pin, one pint Syntron Oil, Carrying Case and Instruction Card.

Fully guaranteed.

Each

Type 8 Hammer

Type MK Hammer

SYNTRON HAMMER STAR DRILLS

Size	6-inch	9-inch
$\frac{5}{16}$ -inch	\$5.00 doz	\$5.30 doz.
$\frac{3}{8}$ -inch	5.50 doz	5.70 doz
$\frac{1}{2}$ -inch	6.00 doz	6.60 doz.
$\frac{9}{16}$ -inch	6.50 doz.	7.30 doz.
$\frac{5}{8}$ -inch	7.00 doz.	8.00 doz.

Discount

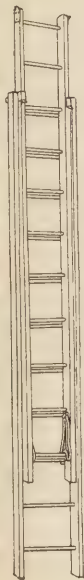
%

AWNING LADDERS

These Spruce Ladders offer everything that can be expected in a ladder; light weight, easy to handle, maximum safety, longer service.

The rails are made of clear, well seasoned, straight grain West Coast Spruce—one of the lightest, strongest and most durable woods that grow.

The rounds are made from carefully selected, thoroughly seasoned, second growth hickory. The ends of these rounds are treated with a patented creosoting process which prevents the rounds from shrinking or rotting out. This added protection is a safety feature found only in the ladders we handle. Only clear, carefully selected material is used.



AWNING EXTENSION

Equipped with Y hook, and 2 bend casting, these parts rust-proofed to prevent rust.

Side Rails measure $1\frac{1}{4}$ inches by $2\frac{5}{8}$ inches.

Bottom Section measures *outside* $15\frac{5}{8}$ inches.

Top Section measures *outside* 12 inches.

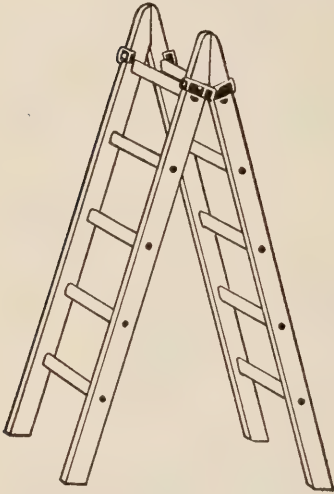
Average Weight $1\frac{3}{4}$ pounds per foot.

Made in any length from 20 feet to 30 feet.

Price per foot.

When longer length ladders are wanted we recommend our Reliable Extension Style.

AWNING LADDERS



TRESTLES

Made from clear, straight grain Spruce. Rails $1\frac{5}{8}$ -inch by $2\frac{3}{4}$ -inch— $1\frac{1}{8}$ -inch—Hickory rungs. They are clamped together at the top with heavy wrought iron. Lengths 5 feet to 20 feet. Both sides measured in billing.

Price per foot.....

SAFETY LADDER GRIP

Suction Foot Type



THE SUCTION GRIP

Equip all your ladders with Safety Ladder Grips to prevent slipping with consequent accidents. These grips can be quickly applied. The castings are good forever, even though the ladder wears out.

Rubber Suction Grip Pads are renewable.

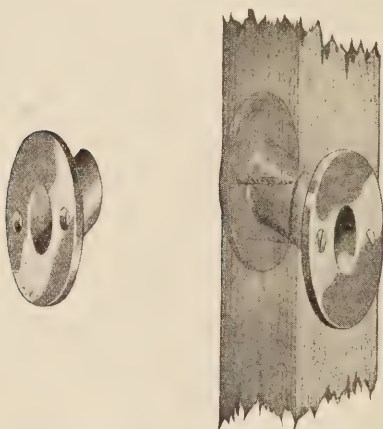
- | | | |
|-------|--|----------|
| No. 2 | For $1\frac{1}{4}$ -inch rails of Extension Ladders..... | Per Pair |
| No. 4 | For $1\frac{5}{8}$ -inch rails of Trestle Ladders..... | |

SECTION IX
SCREEN FIXTURES AND
VENTILATORS

Contents

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Adjusters, Inside Awning.....	187
Awnloks.....	188-189
Pulleys, Screen.....	186
Slides, Brass Rope.	186

BRASS ROPE SLIDES FOR SCREENS



A simple, inexpensive, yet an attractive fitting to allow awnings to be raised from inside. Very easily applied to screen by drilling hole and inserting slide from each side. Two pieces comprise a set, one for inside and one for outside of screen.

Per Hundred

Solid Brass to prevent corroding.....

Per Gross

$\frac{3}{4}$ -inch No. 5 Flat Head Brass Wood Screws
to fasten brass rope slides to screens....

ASTRUP SCREEN PULLEYS



Made Entirely of Brass

An efficient, small yet inexpensive rope interior control. It can be easily installed either at top or bottom of screen or at both points if desired.

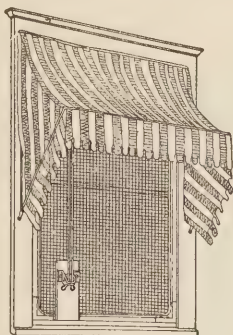
Will take ropes up to $\frac{3}{8}$ -inch diameter.

Packed 100 pieces in a box.

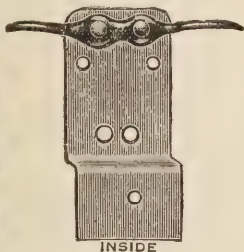
INSIDE AWNING ADJUSTER

For Operation of Awnings through
Wood or Metal Screens

Patented



Above illustration shows how ropes operate through screens.



The adjuster is to be furnished in galvanized finish and is made in two sizes; one for wood screens and another for metal screens.

It is also equipped with an awning cleat for use on inside of building.

To install the adjuster use two short stove bolts to clamp through the screen and a long stove bolt to secure the two parts through the screen frame.

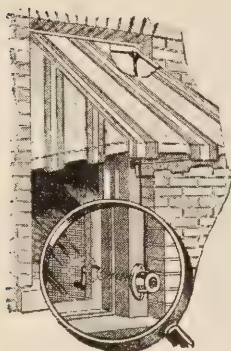
Please specify when ordering whether the adjuster is intended for use on wood or metal screens.

Price each

AWNLOK

Reg. U. S. Patent Office

A Patented Inside Control for all Awnings



The Awnlok is a device for the raising and lowering (to any position) of the awnings from the inside of house or building.

The Awnlok is manufactured of a super grade zinc and steel alloy, absolutely rust-proof against years of wear; the interior section of the Awnlok is nickel plated to harmonize with the best surroundings.

The Awnlok is labor saving, durable and efficient, and does not have to be removed when awnings are taken down.

It operates on a rotary principle and locks by a patented gravity lock, and is absolutely fool-proof.



The Awnlok comes packed one to the carton, complete with instructions, and with the regular handle, and 5 feet of wire cable (with a lifting strength of 485 lbs.), also screws for installation. If so desired, extra lengths of wire may be had, also a special extension key; these can be furnished upon application.

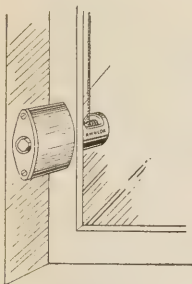
Each.....\$4.00

Discount %

AWNLOK WIRE CABLE

We carry a stock of 5 ft., 7 ft., and 9 ft. lengths of Awnlok cable for replacement, prices on application.

AWNLOK FOR STEEL WINDOWS OR SCREENS



Awnloks can now be installed on all steel window frames, for all that is necessary is to place the Awnlok locking end in the special housing, and bolt this through the steel window frame or screen.

Each

Awnlok Housing....

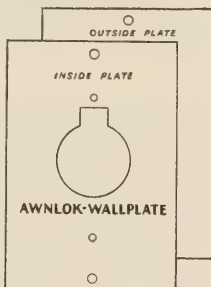
AWNLOK STEEL PLATES FOR PLASTER OR BRICK

Cadmium Plated

Awnlok Wall Plates are completely furnished with toggle bolts. These plates prevent cracked walls, and further, insures permanent installation of the Awnlok.

Per Pair

Awnlok Wall Plates



"PACO" ROPE CONNECTOR

Cadmium Plated Eliminates Use of Knots

No. 2
for 2 ropes

No. 4
for 3 or 4 ropes

The Paco joins the Awnlok cable with the awning ropes, eliminating unsightly knots. Can also be used for any kind of rope joining.

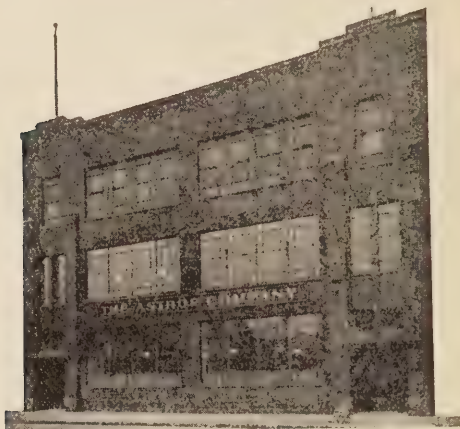
Further information on request.



Each

No. 2 Paco Rope Connector.....
No. 4 Paco Rope Connector.....

THE ASTRUP COMPANY WAREHOUSES



2937 WEST 25th STREET, CLEVELAND, OHIO
Telephone, SHadyside 5000



1908 LOCUST STREET, ST. LOUIS, MO.
Telephone, Central 2252



39 WALKER STREET, NEW YORK, N. Y.
Telephone, Canal 6-6444

SECTION X

FINISHING SUPPLIES

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SHEET BRASS GROMMETS

With Washer

	Diameter Inserted	Less 50 Gross	50-250 Gross	Over 250 Gross
No. 0	$\frac{1}{4}$. . .			
No. 1	$\frac{5}{16}$. . .			
No. 2	$\frac{3}{8}$. . .			
No. 3	$\frac{7}{16}$. . .			
No. 4	$\frac{1}{2}$. . .			
No. 5	$\frac{5}{8}$. . .			



Packed in one gross boxes

Sheet Brass Grommets are also carried in stock packed in 5-gross and 25-gross bulk packages. Washers packed separately in the 25-gross boxes only. When purchased in 5-gross boxes, deduct 1c per gross. When purchased in 25-gross boxes, deduct 2c per gross.

With Teeth



	Diameter Inserted
No. 0	$\frac{1}{4}$
No. 1	$\frac{5}{16}$
No. 2	$\frac{3}{8}$
No. 3	$\frac{7}{16}$
No. 4	$\frac{1}{2}$
No. 5	$\frac{5}{8}$

Packed in one gross boxes

WHITE METAL GROMMETS

With Washers

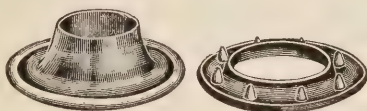
	Diameter Inserted	Per Gross
No. 0	$\frac{1}{4}$	
No. 1	$\frac{5}{16}$	
No. 2	$\frac{3}{8}$	
No. 3	$\frac{7}{16}$	
No. 4	$\frac{1}{2}$	
No. 5	$\frac{5}{8}$	

Packed in one gross boxes

The above sizes of white metal grommets can also be packed in 20 gross bulk packages. When purchased in that way deduct 2c per gross.

CONICAL POINTED GROMMETS

Cast Brass



	Diameter Inserted	Per Gross
No. 2	$\frac{3}{8}$	
No. 3	$\frac{7}{16}$	
No. 4	$\frac{1}{2}$	
No. 5	$\frac{5}{8}$	
No. 6	$\frac{3}{4}$	
No. 7	1	
No. 8	$1\frac{1}{8}$	

Packed in one gross boxes

SPUR GROMMETS

Sheet Brass



	Diameter Inserted
No. 0	$\frac{1}{4}$
No. 1	$\frac{5}{16}$
No. 2	$\frac{3}{8}$
No. 3	$\frac{7}{16}$
No. 4	$\frac{1}{2}$
No. 5	$\frac{5}{8}$
No. 6	$\frac{3}{4}$
No. 7	1
No. 8	$1\frac{1}{8}$

Packed in one gross boxes

OBLONG AWNING GROMMETS



Per Gross

Small $\frac{11}{16}$ inch.....

Large $\frac{7}{8}$ inch.....

Packed in one gross boxes

CUTTERS

For Oblong Awning Grommets



Each

Small $\frac{11}{16}$ inch.....

Large $\frac{7}{8}$ inch.....

SETTING DIES

For Inserting Oblong Awning Grommets

No. 1 Small

$\frac{11}{16}$ Grommet

Each.....



No. 2 Large

$\frac{7}{8}$ Grommet

Each.....

ASTRUP SETTING DIES

For Inserting Round Grommets
Made of Best Quality Forged Tool Steel



	Each
No. 0.....	\$2.70
No. 1.....	3.00
No. 2.....	3.10
No. 3.....	3.20

	Each
No. 4.....	\$3.50
No. 5.....	3.80
No. 6.....	4.30
No. 7.....	4.70
No. 8.....	5.30

NOTE: Sheet Brass Setting Dies furnished only in sizes from Nos. 0 to 5 inclusive.

Spur and Conical Point Style Setting Dies furnished in sizes Nos. 0 to 8 inclusive.

Discount For Sheet Brass...	%
Discount for Conical Point and Other Styles	%

SETTING DIES

For Inserting Sheet Brass and Teeth Grommets

These Setting Dies are made of special steel, and designed to insert Astrup Sheet Brass and Teeth Grommets only.

These dies are designed only for the person that has but a few grommets to insert, and are not intended for commercial use. They are primarily made to sell at a low price and are not warranted.

	Each
No. 0-X For setting No. 0 Grommets.	
No. 1-X For setting No. 1 Grommets.	
No. 2-X For setting No. 2 Grommets.	
No. 3-X For setting No. 3 Grommets.	
No. 4-X For setting No. 4 Grommets.	
No. 5-X For setting No. 5 Grommets.	

CUTTERS

These cutters are forged from the best grade of tool steel, and are carefully tempered. The holes have sufficient taper leading from the cutting edge to permit the punchings to clear freely, thereby requiring only a light blow of the mallet to cut with ease.

Side



	Each		Each
No. 0.....	\$.50	No. 5.....	\$ 1.35
No. 1.....	.50	No. 6.....	1.65
No. 2.....	.60	No. 7.....	2.00
No. 3.....	.60	No. 8.....	2.35
No. 4.....	.85		

Discount.....%

Special



	Each		Each
No. 0.....	\$.75	No. 5.....	\$.90
No. 1.....	.75	No. 6.....	1.10
No. 2.....	.75	No. 7.....	1.30
No. 3.....	.75	No. 8.....	1.60
No. 4.....	.80		

Discount.....%

The above numbers on Cutters correspond respectively to the sizes of our grommets.

RAWHIDE MALLET



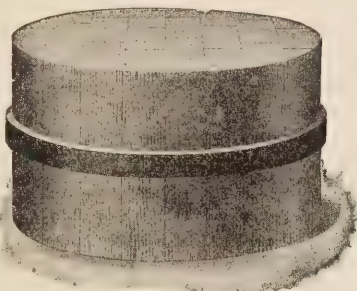
The handles of these mallets will not break, bend, work loose, or blister the hand. They are made of leather.

Rawhide Mallets should always be used to strike Setting Dies and Cutters to obtain best results. Never use a steel hammer if you want to obtain maximum efficiency and longevity of use of setting dies and cutters, for a steel hammer strikes such a severe blow (without absorbing the shock) that it crystallizes the steel in the setting die or cutter.

Each

No. 1	3 lbs.....
No. 2	4 lbs.....
No. 3	6 lbs.....

FINISHING BLOCKS



14 inches diameter by 8½ inches high with iron bands.

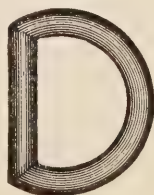
Each.....

DEE RING

Galvanized Malleable Iron

Galv.
Per Gross

5⁄8-inch.....
1 -inch.....
1¼-inch.....
1½-inch.....



GRIPS-IT LIQUID FABRIC CEMENT



GRIPS-IT Fabric Cement has the most adhesive, or "stick-to-it," qualities of any cement on the market. It is particularly adapted for use on painted and waterproof fabrics, or on materials that have a treated finish. It is equally effective when used on woven stripes. It can also be used on burlap, automobile and upholstery fabrics, etc.

Furnished in containers with spouts, which make it easy to apply. After being in use a film will form over hole in spout, effectively sealing contents and preventing evaporation—this also prevents cement from hardening or drying out. Each drop is usable—no waste. When cement is again to be put in use—the film that formed over hole in spout is easily removed.

This cement is also waterproof and is not affected by oil, steam or heat.

Repairs are made quicker with GRIPS-IT Cement, than by sewing the material.

Furnished in the following containers:

	Each	Price Dozen
$\frac{1}{4}$ pint can.....		
$\frac{1}{2}$ pint can.....		
1 pint can.....		
1 quart can.....		
1 gallon can.....		

“KWIKMEND” FABRIC CEMENT



An entirely new product, having powerful adhesive qualities not affected by water, heat or the roughest handling.

Repairs are perfectly flexible and are permanent, and will outlast the article being repaired. Can be used on awnings, tents, boats, canvas covers, bags and lawn furniture.

Easy to use, and even major repairs are quickly made.

Each

Quart Cans.....
Gallon Cans.....

LITTLE BEAR LIQUID FABRIC CEMENT

This cement makes a quicker and better job than sewing and is absolutely waterproof.

For use on all canvas materials and for use on material such as rain coats, auto tops, side curtains and upholstery.

	Price	
	Each	Dozen
1 ½ Oz. Jar.....		
¼ Pint Can.....		
½ Pint Can.....		
1 Pint Can.....		
1 Quart Can.....		
½ Gallon Can.....		
1 Gallon Can.....		

Thinner for Little Bear Cement

1 Pint Can.....	
1 Quart Can.....	

MULTI-DUTY MACHINE

For inserting Grommets, and applying Clinch Staples

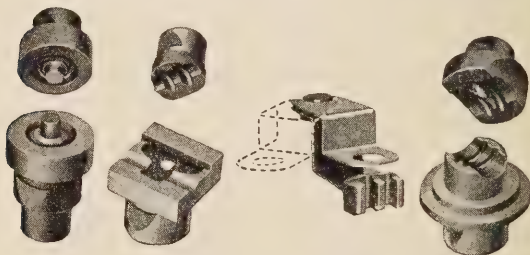


This machine is particularly designed to insert grommets, and to apply clinch staples. It can be set up in a few minutes. The machine is equipped with a foot treadle for efficient operation, and also a safety lever to control the piston stroke when cutting holes in the cloth for grommets. This is a heavy duty machine and is well constructed in every detail. It will give satisfactory service for many years. Floor stands are also available, made of steel, for the Multi-Duty Machine. These stands are shipped "knocked down," and when assembled are 32" high, and require floor space 20" square. The trays are 10" square.

Each Multi-Duty Machine, less dies .

Stand only, for Multi-Duty Mach.

DIES FOR MULTI-DUTY MACHINE



Grommet Dies for Nos. 1, 2, 3 and 4 Sheet Brass Grommets.

Combination Oblong and Straight Clinch Staple Die.

Attachment for Combination Clinch Staple Die.

Dies for applying 1/4" Wire Rope Splicers.

NOTE: Dies for Wire Rope Ends are similar in appearance to illustration of Wire Rope Splicer Die.

All dies are interchangeable, and can be quickly attached to the die holder in the machine.

The Grommet Dies will cut holes in the cloth and will also insert the grommets. The bottom half of these dies have pin inserts that securely hold grommets in position while setting.

Attachments are provided for Clinch Staple Dies that will press cloth over prongs of staples. This makes installation of staples a very simple operation.

The Dies for applying Clinch Staples will perform operation with a single stroke.

Each

Multi-Duty Die for No. 1 S. B. Grommets

Multi-Duty Die for No. 2 S. B. Grommets

Multi-Duty Die for No. 3 S. B. Grommets

Multi-Duty Die for No. 4 S. B. Grommets

Multi-Duty Die for Clinch Staples.....

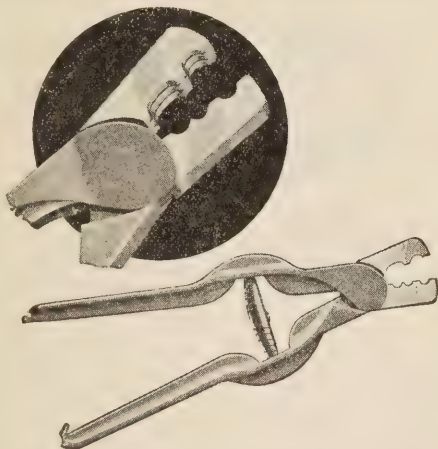
Attachment for Multi-Duty Clinch Staple Die

Multi-Duty Die for 1/4" Wire Rope Ends....

Multi-Duty Die for 1/4" Wire Rope Splicers.

COMBINATION PLIERS

For Setting $\frac{1}{4}$ " Wire Rope Ends and Splicers



These pliers will set both $\frac{1}{4}$ " wire rope ends and wire rope splicers quickly, easily and perfectly. They are ruggedly constructed to give years of satisfactory service. They are designed for use only with Astrup Wire Rope Ends and Splicers. These pliers should be included in the tool kit of each awning erector.

Each

Combination Pliers.....

ASTRUP WIRE ROPE ENDS AND SPLICERS

For $\frac{1}{4}$ " Manila Rope
Made of Copper Wire



The wire rope ends whip the ends of $\frac{1}{4}$ -inch Manila Rope effectively and neatly. The rope will not ravel when these ends are used.

The splicers will connect two ropes together or can be used to advantage in tents and tarpaulins where the rope is passed through a grommet or gripper and where a loop is desired.

Per Gross

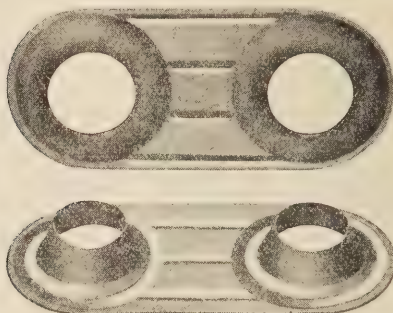
No. 1 Wire Rope Ends.....

No. 6 Wire Rope Splicers

Packed in 5-Gross Boxes

SAMSON METALLIC GRIPPERS

Patented



The Samson Metallic Gripper has been further improved by adding ribs that interlock in the cloth. This greatly increases their strength and rigidity. Tests prove Samson Metallic Grippers to be twice as strong as Spur Grommets of corresponding size. Grippers are easily inserted and provide an inexpensive installation. Grippers are made of zinc.

They are made in two styles, with long or short tubes.

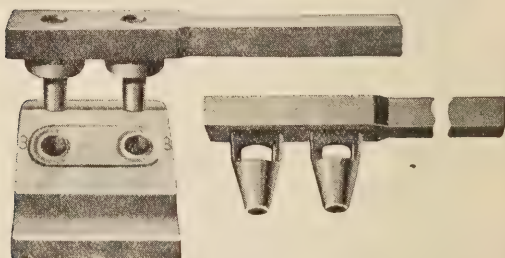
Packed 1000 pieces to a box.

Per Hundred

Grippers with Short Tubes, $\frac{9}{32}$ " high...

Grippers with Long Tubes, $\frac{13}{32}$ " high...

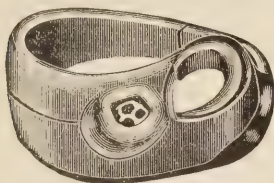
SAMSON GRIPPER HAND TOOLS



Price Each

Gripper Hand Tool Set, comprising of one Die Block, two Handles, two Cutters and two Dies.....

PALMS



Sailors' Palms

Per Doz.

No. 1	Common hide
No. 2	Regular hide
No. 3	Plain brass
No. 4	Hide and brass
No. 5	Regular hide, buckled
No. 6	Regular hide, roping
No. 7	All hide, buckled

Sail Makers' Palms

Per Doz.

No. 8	English pattern, seaming
No. 9	English pattern, roping
No. 10	American pattern, seaming
No. 11	American pattern, roping
No. 12	Best seaming
No. 13	Best roping

BEES WAX

Less
10 lbs.10 lbs.
and over

Carried in 1 lb. cakes

SMITH'S SAIL NEEDLES

Long Square



No.	Length	Per Hundred	No.	Length	Per Hundred
6	4 $\frac{1}{2}$ "	\$23.50	14	2 $\frac{3}{4}$ "	\$3.40
7	4 $\frac{3}{8}$ "	18.60	14 $\frac{1}{2}$	2 $\frac{7}{8}$ "	3.70
8	4 $\frac{1}{8}$ "	14.90	15	2 $\frac{5}{8}$ "	3.10
9	3 $\frac{7}{8}$ "	11.10	15 $\frac{1}{2}$	2 $\frac{3}{4}$ "	3.10
10	3 $\frac{1}{2}$ "	9.30	16	2 $\frac{3}{8}$ "	3.10
11	3 $\frac{1}{4}$ "	7.50	16 $\frac{1}{2}$	2 $\frac{1}{2}$ "	3.10
12	3 $\frac{1}{8}$ "	5.60	17	2 $\frac{1}{8}$ "	3.10
13	3"	4.40			

Packed 25 pieces to a package

Discount

%

CURVED NEEDLES

With Round Points

These needles are curved for repairing awnings by hand.

Per Hundred

4-inch.....

5-inch.....

6-Inch.....

PACKING OR SACKING NEEDLES

No.	Length	Per Gross	No.	Length	Per Gross
14	3	\$2.60	9	5 $\frac{1}{2}$	\$8.10
13	3 $\frac{1}{2}$	3.10	8	6	8.90
12	4	4.00	7	7	13.80
11	4 $\frac{1}{2}$	5.00	6	8	18.80
10	5	6.30	5	9	26.30

Discount.....

%

Packed 36 pieces to a package



AWNVAK

For Waterproofing Awnings

Awnvak, the original and only satisfactory Waterproof treatment for all painted, woven or dyed awning fabrics. Does not change the color or appearance of the cloth, and is easy to apply with the special Awnvak Sprayer. Awnvak is *not* a general purpose treatment. It is made only for Awnings and Canopies. Adjust your leakage complaints without taking down awnings by using Awnvak. One gallon will cover about 100 square feet of fabric. Made in Colorless only.

CANVAK

Waterproofs Tents, Tarpaulins, Covers

Canvak, a heavy duty Waterproof paint for tents, tarpaulins, covers and all canvas products. Made in Khaki, Brown, Forest Green, Olive Drab, Apple Green, Spruce Green, Yellow, Orange, Red, Blue, Battleship Gray and Colorless.



A SPECIAL SPRAYER WITHOUT CHARGE

As special offer for an order covering 33 gallons or more for shipment at one time in drums, a 2½-gallon pressure type sprayer for applying Awnvak and Canvak will be included without extra charge.

PRICES

AWNVAK and CANVAK

Per gallon

55 Gallon Drums (including Sprayer)...

33 Gallon Drums (including Sprayer)...

5 Gallon Cans.....

24 One Gallon Cans.....

6 One Gallon Cans.....

Single Gallon Cans.....

Special Sprayer, when ordered with gallon and five gallon units.....

No charge is made for the drum which need not be returned.

PRESERVO

A protective liquid compound for water-proofing and mildew-proofing canvas. Preservo leaves canvas soft and flexible. One gallon covers about 90 sq. ft. of 10 oz. or 11 oz. canvas.

Comes in following colors: Brown, Buff, White, Black, Gray, Green, Colorless, Olive Drab.



Clear Preservo for water-proofing and preserving painted and woven stripe or dyed goods—will not affect the color.

A 2½-gallon pressure sprayer will be given gratis with each 30-gallon shipment of Clear Preservo, in any standard container.

Buff(Khaki)	Colorless	Gray
Neutral	White O-D	Pea-
Brown-	Std. Green	Green
Black		

- 55 Gal. Steel Agitator Drums----
- 30 Gal. Steel Agitator Drums----
- 5 Gal. Cans (2 to case)-----
- 1 Gal. Cans (10 to case)-----
- 1 Gal. Cans (less than case) ----
- ½ Gal. Cans (10 to case)-----
- ¼ Gal. Cans (20 to case)-----

ALUMINUM EMULSION NO. 5

For House Awnings, Canopies, Tarpaulins,
Auto Sport Tops



Aluminum Emulsion No. 5 is for use on canvas and all fabrics. It penetrates all fibres thoroughly—leaves an indestructible metal coating. It will not stiffen canvas or other fabrics. Material treated with Aluminum Emulsion No. 5 remains soft and flexible under all conditions, and is water-proof and mildew-

proof. It is a beautiful protective coating for all fabrics. One gallon covers about 125 sq. ft.

$\frac{1}{8}$ -Gallon Can.....	Each
$\frac{1}{4}$ -Gallon Can.....	Each
1 -Gallon Can.....	Gal.
5 -Gallon Can.....	Gal.

PRESERVO CANVAS PAINT

When applied to old or new Awnings, this Canvas Paint refinishes and rehabilitates them, making them bright and attractive, as well as water-proof and mildew-proof. It will add years of service, and will leave the fabric soft and flexible. Just the thing to use where your client cannot afford a new awning.



Made in Standard Greens, Yellow, Terra Cotta, Blue, Red and Orange.

5 Gal. Pails.....	per Gallon
1 Gal. Pails (4 to case).....	per Gallon
$\frac{1}{2}$ Gal. Pails (6 to case).....	per Can
$\frac{1}{4}$ Gal. Cans (12 to case)....	per Can

ASTRUP AWNING LETTERING OR STENCIL PASTE

This paste is made in various colors and is specially prepared for awning lettering and stenciling.

This paste can be thinned to working consistency by mixing with equal parts of linseed oil or turpentine and Japan Dryer. One gallon of concentrated paste has the following weight: Extra Black weighs 10 lbs.; Ultramarine Blue or Standard Black weighs 18 lbs.; all other colors weigh 25 lbs. Save money by preparing your own paints.

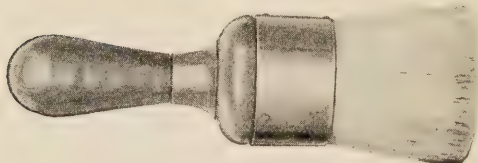
Astrup Pastes are ground extremely fine and are of the best hiding and covering quality.

Supplied in the following colors:

		Price Per Pound	
		2 Lb. Cans	5 Lb. Cans
No. 1671	Black—Standard.....		
No. 8577	Black—Extra.....		
No. 2915	Blue—Ultramarine...		
No. 3090	Brown.....		
No. 6074	Green.....		
No. 5074	Orange—Brilliant....		
No. 4614	Red—Sunfast.....		
No. 6761	White—Standard.....		
No. 8305	White—Weatherproof		
No. 6041	Yellow—Medium.....		

STENCIL BRUSHES

Set in Rubber

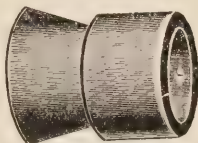


These stencil brushes have black, stiff bristles which are set in rubber, and are equipped with nicked steel ferrules. Handles are of yellow, polished wood. These brushes are fully warranted.

No.		Diameter	Length Out	Price Each
34	Stencil Brush	1 -inch	1 $\frac{3}{8}$ -inch...	
38	Stencil Brush	1 $\frac{1}{4}$ -inch	1 $\frac{1}{2}$ -inch...	
44	Stencil Brush	1 $\frac{1}{2}$ -inch	1 $\frac{5}{8}$ -inch...	

NECKS FOR WATER BAGS

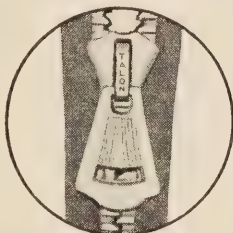
Galvanized Iron



Per Hundred.....

TALON OR HOOKLESS FASTENER

Patented



Intended for use on flaps of tents, bags, curtains and any other canvas articles requiring a strong and weather-tight construction. Furnished in the following styles:

No. 5 or Light size.

No. 6 or Heavy size.

Can be furnished from 6-inch strips upward.

Hookless Fasteners can be furnished on olive drab, white or black webbing, ready for sewing to the canvas. These fasteners are only carried in stock on the Olive Drab webbing. Other colors of webbing are supplied only from factory.

Fasteners with lock sliders for coin bags can also be furnished.

Please specify quantity, length strips and color webbing required.

Prices on application.

PIN AND SOCKETS

For Floor Cloth and Carpets



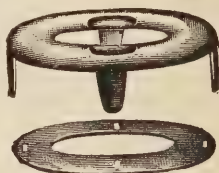
Socket inserted in floor. Put pin through grommet in cloth into socket.

Per gross.....

Packed in one gross boxes

CURTAIN FASTENERS

With Oval Eyelets Brass



With Steel Springs and Pins

Per Hundred

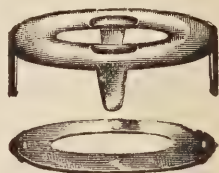
No. 6 Reliable, Single.....

No. 7 Reliable, Double.....

With Brass Springs and Pins

No. 6-B Reliable, Single.....

No. 7-B Reliable, Double.....



Per Hundred

No. 1 Perfection, Single.....

To be used when both parts are attached to canvas.

Packed 100 pieces to a box

FLAT HEAD BRASS WOOD SCREWS

For Nos. 6 and 7 Curtain Fasteners

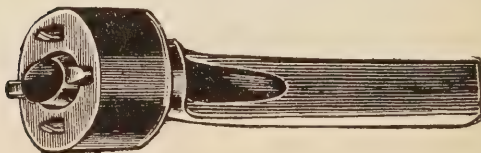
Per Gross

$\frac{1}{2}$ -inch No. 5.....

$\frac{3}{4}$ -inch No. 5.....

CUTTER

For Curtain Fasteners



Each

Fits No. 1, 6, 7 sizes.....

“LIFT THE DOT” FASTENERS Nickel Finish



For use on Wood

No. 608

For use on Canvas Socket
Per Hundred

- No. 8852 Single, Wood Hexagon Base,
complete.....
No. 8853 Double, Wood Hexagon Base,
complete.....
No. 8895 Single, for Canvas, complete..
No. 8896 Double, for Canvas, complete.
Packed 100 pieces to a box

HAND TOOLS



Fig. 1



Fig. 2

Fig. 3
Per Each

- No. 1 Hand Punch for Lift the Dot
Socket 608 with chisel point.....
No. 2 Special Screw Driver for Lift the
Dot slotted head studs.....
No. 3 Yankee Screw Driver Bit for Lift
the Dot slotted head studs.....

CURTAIN KNOBS

Japanned Iron



Per Hundred

No. 2 $\frac{7}{8}$ -inch shank

Use with No. 2 Grommet

Packed 100 pieces to a box

BUTTON HOLES FOR WAGON
CURTAINS

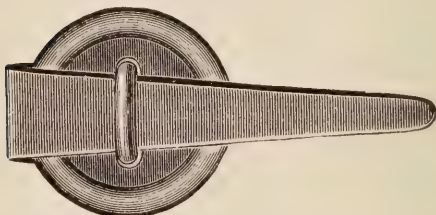
Per Hundred

No. 1 Harness Leather Button Holes . . .

Packed 100 pieces to a box

“PERFECTION” WAGON CURTAIN
PATCHES

Patented

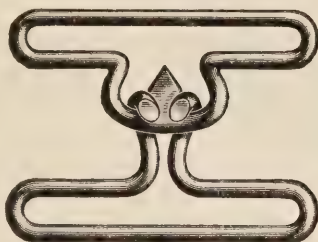
With Japanned
Screw Eyes

Per Hundred

No. 4

No. 5

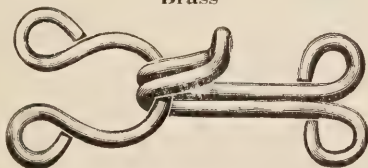
Packed 100 pieces to a box

AUTO-LOCK CLASPS**Nickel Finish**

Per Gross

$\frac{1}{2}$ -inch	
$\frac{5}{8}$ -inch	
$\frac{3}{4}$ -inch	

Packed in five-gross boxes.

HOOK AND EYES**Brass**

Length over all, 2 inches

Per Gross

Hooks and Eyes	
Hooks only	

Packed in one gross boxes

HAND FIDS

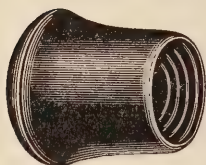
Number	1	2	3	4
Length, inches	14	16	18 $\frac{1}{2}$	20 $\frac{1}{2}$
Price, each				

BENCH HOOKS

Each

Brass Swivel

RUBBER TIPS



Intended to be slipped over ends of $\frac{1}{2}$ -inch pipe, when that size is used on roller curtains.

Rubber Tips prevent ends of pipe from chafing side of house.

Per Hundred

.....

SHOWER BATH CURTAIN LOOPS

Nickel Finish Only

1-inch and $1\frac{3}{8}$ -inch

Packed 100 pieces in box

Per Hundred

1 inch

$1\frac{3}{8}$ inch



100-1000 pieces...

1000-5000 pieces...

Over 5000 pieces...

BRICK FABRIC CLEANER



This brick fabric cleaner can be used for cleaning soiled and dirty awnings. Spread the awning on a smooth dry place. Rub the brick cleaner back

and forth with the stripes. This cleaner will not injure the colors or the fabric. This cleaner can be used on any kind of fabrics other than awning fabrics to remove soil spots. Awnings and other material can be used immediately after cleaning.

Made in handy brick form. 3 inches by 3 inches by 6 inches.

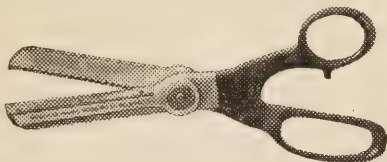
Easy to handle, no liquid necessary.

It will not decompose.

Price

each

PINKING SHEARS



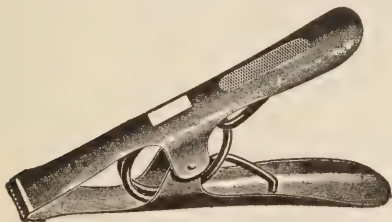
This is an ideal tool for cutting off samples. It cuts and pinks simultaneously. Gives perfect pinked finish to raw edged seams. Easy strokes of shears cuts any material—it cannot pull. Teeth of special high carbon steel, and are always sharp. In fact, the blades are self sharpening.

Pinking adds the finishing touch to a sample.

Price

each.

IMPROVED STEEL CLOTH CLAMP



Per Dozen.....

Oil Tempered Spring, full length $6\frac{1}{4}$ inches.
Opens $3\frac{1}{2}$ inches.

CLINCH STAPLES



Oblong



Straight

A quick, secure, cheap method of finishing off Awnings and Curtains, making them easy to put up and take down. A quarter turn of the screw eyes will do the job. Use No. 9 Screw Eyes.

Packed in 1 gross boxes.

Per Gross

Oblong.....
Straight.....

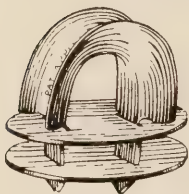
AWNING ROPE GLIDES**No. 1 B-T Style**

Are made entirely of brass, consequently cannot rust. Always work smoothly, and positively will lengthen the life of an awning.

Awnings, when wet, can be pulled up just as easily, as all friction has been eliminated.

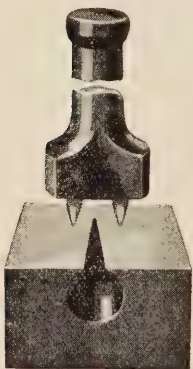
Price based on quantity ordered.

Packed in boxes of 100, 200, 500 and 1000 pieces.

AWNING ROPE GLIDES**No. 2 Trystyle
Brass**

Packed in boxes of 100, 200, 500 and 1000 pieces.

Price based on quantity ordered.

CLINCHING DIES and CUTTERS**For Awning Rope Glides**

For No. 1 B-T
Rope Glides



For No. 2 Trystyle
Rope Glides

Per Set

Die and Cutter for No. 1 B-T Rope Glides

Die and Cutter for No. 2 Trystyle Rope
Glides.....

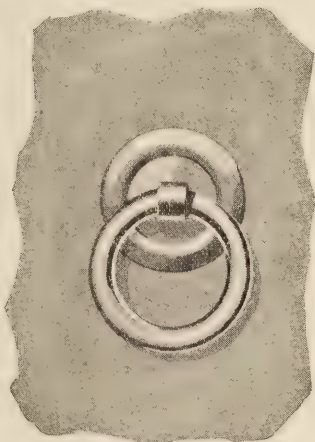
Cutters are used to space holes properly in canvas. Dies are used to hold Glides while prongs are clinched by fingers or tools.

BRASS DISCS AND PRONG

For Ring Attachment
With Cotter Pin



Before
Assembling



After Assembling
With Ring Attached

This is a labor saving device for applying rings on awnings, which is strong and practical. The supporting strength of the rings is greatly increased. It allows for free movement of the rings so that they assume the proper position at all times.

All sizes of rings from $\frac{3}{8}$ -inch to $\frac{3}{4}$ -inch can be used in connection.

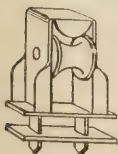
Furnished only in cartons of 500 sets each.

Tools for setting this device can be furnished at a small additional cost.

Per Hundred Sets.....

BRASS AUTOMATIC PULLEYS

Furnished with Brass Machined Sheaves



These pulleys are sturdy and compact and eliminate wear and tear on canvas by placing ropes on the outside of the awning, through the automatic pulley.

Per Hundred...

SMOOTH RINGS

Galvanized Malleable Iron Thoroughly Annealed



Per lb.

per lb.

$\frac{3}{8}$ -inch...	$1\frac{1}{8}$ -inch....
$\frac{1}{2}$ -inch...	$1\frac{1}{4}$ -inch....
$\frac{5}{8}$ -inch...	$1\frac{1}{2}$ -inch....
$\frac{3}{4}$ -inch...	$1\frac{3}{4}$ -inch....
$\frac{7}{8}$ -inch...	2 -inch....
1 -inch...	$2\frac{1}{4}$ -inch....

Above rings of $\frac{3}{8}$ inch to 1 inch inclusive are light weight.

Heavy rings can also be furnished in same sizes.

Hot Galvanized Rings can also be furnished in all light weight rings ranging in size from $\frac{3}{8}$ inch to 1 inch inclusive extra per lb.

EXTRA SMOOTH RINGS

FOR RING MACHINE

Galvanized Malleable Iron

These rings are absolutely smooth and are free from all burrs, thereby eliminating possibility of breaking needles by hitting rough spots.

per lb.

$\frac{3}{8}$ inch inside diameter.....
$\frac{1}{2}$ inch inside diameter.....
$\frac{5}{8}$ inch inside diameter.....
$\frac{3}{4}$ inch inside diameter.....
$\frac{7}{8}$ inch inside diameter.....
1 inch inside diameter.....

HEAVY TENT RINGS

Galvanized Steel

Diameter of Ring	Diameter of Iron	Per lb.
$2\frac{1}{2}$ -inch	$\frac{3}{8}$ -inch.....	
$2\frac{3}{4}$ -inch	$\frac{3}{8}$ -inch.....	
3 -inch	$\frac{3}{8}$ -inch.....	
$2\frac{1}{2}$ -inch	$\frac{1}{2}$ -inch.....	
$2\frac{3}{4}$ -inch	$\frac{1}{2}$ -inch.....	
3 -inch	$\frac{1}{2}$ -inch.....	

SECTION XI

SCREWS AND FASTENING DEVICES

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AWNING SCREW EYES

Bright Wire and Cadmium Plated
With Sharp Gimlet Points for Quick Starting



No.	Inside Dia.	Length Shank	Length Overall	Per Gross	No.	Inside Dia.	Length Shank	Length Overall	Per Gross
0	$\frac{13}{16}$	$1\frac{9}{16}$	$2\frac{7}{8}$	\$3.60	12	$\frac{3}{8}$	$\frac{37}{64}$	$1\frac{3}{16}$	\$.45
1	$\frac{25}{32}$	$1\frac{7}{16}$	$2\frac{13}{16}$	3.00	13	$\frac{23}{64}$	$\frac{17}{32}$	$1\frac{1}{16}$	.40
2	$\frac{23}{32}$	$1\frac{5}{16}$	$2\frac{5}{8}$	2.50	14	$\frac{11}{32}$	$\frac{1}{2}$	$1\frac{1}{16}$	.40
3	$\frac{21}{32}$	$1\frac{7}{32}$	$2\frac{7}{16}$	2.00	104	$\frac{39}{64}$	$1\frac{1}{8}$	$2\frac{7}{16}$	1.60
*4	$\frac{39}{64}$	$1\frac{1}{8}$	$2\frac{7}{16}$	1.60	105	$\frac{19}{32}$	$1\frac{1}{32}$	$2\frac{1}{8}$	1.30
5	$\frac{19}{32}$	$1\frac{1}{32}$	$2\frac{1}{8}$	1.30	106	$\frac{17}{32}$	$\frac{31}{32}$	$1\frac{15}{16}$	1.00
*6	$\frac{17}{32}$	$\frac{31}{32}$	$1\frac{15}{16}$	1.00	107	$\frac{31}{64}$	$\frac{29}{32}$	$1\frac{13}{16}$	.85
7	$\frac{31}{64}$	$\frac{29}{32}$	$1\frac{13}{16}$	.85	108	$\frac{15}{32}$	$\frac{13}{16}$	$1\frac{5}{8}$	.75
*8	$\frac{15}{32}$	$\frac{13}{16}$	$1\frac{5}{8}$	.75	109	$\frac{7}{16}$	$\frac{3}{4}$	$1\frac{9}{16}$	.65
*9	$\frac{7}{16}$	$\frac{3}{4}$	$1\frac{9}{16}$	.65	110	$\frac{13}{32}$	$\frac{11}{16}$	$1\frac{3}{8}$	.55
*10	$\frac{13}{32}$	$\frac{11}{16}$	$1\frac{3}{8}$	.55	111	$\frac{25}{64}$	$\frac{5}{8}$	$1\frac{5}{16}$	.50
11	$\frac{25}{64}$	$\frac{5}{8}$	$1\frac{5}{16}$	.50					

Packed in one gross boxes.

Bright Wire Cad. Plated

Less than 100 gross.....

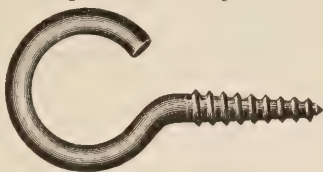
100 gross and over.....

If supplied in 25 gross bulk boxes, an extra
% can be deducted

* Nos. 4, 6, 8, 9 and 10 Screw Eyes can also be
supplied in the Hot Galvanized finish, and in Solid
Brass. Prices on application.

OPEN AWNING SCREW EYES

Bright Wire and Cadmium Plated
With Sharp Points for Quick Starting



		Per Gross
		Bright Wire Cad. Plated
No. 5	
No. 6	
No. 8	
No. 9	
No. 10	

Packed in one gross boxes.

HARDENED SHEET METAL SCREWS

For Sheet Metal Work



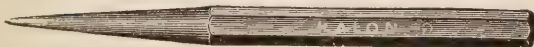
They are threaded and hardened in such a manner as to enable them to cut into sheet metal without stripping their threads. They function in sheet metal like a tap does in iron or steel.

Vibration won't work them loose.

		Per Gross
No. 7 x	$\frac{1}{2}$ inch long.....	
No. 10 x	$\frac{3}{4}$ inch long.....	
No. 10 x	$1\frac{1}{4}$ inch long.....	
No. 14 x	$\frac{7}{8}$ inch long.....	

Packed in one gross boxes.

PUNCH FOR SHEET METAL SCREW



To obtain satisfactory results the holes for hardened sheet metal screws must not be too large nor too small. The stop punch makes them exactly right.

IRON WOOD SCREWS WITH FLAT HEADS

Bright Wire and Cadmium Plated



Price List Per Gross

No.	8	9	10	11	12	14	16
$\frac{3}{4}$ -inch...	.54	.58	.62	.66	.70	.90	....
$\frac{7}{8}$ -inch...	.60	*.64	.68	.72	.76	1.05	....
1 -inch...	.62	.66	*.70	.75	.80	1.10	....
1 $\frac{1}{4}$ -inch...	.66	.70	.76	.84	*.92	1.25	....
1 $\frac{1}{2}$ -inch...	.75	.80	.86	.95	*1.05	1.35	....
1 $\frac{3}{4}$ -inch...	.84	.90	.96	1.05	1.15	1.50	....
2 -inch...	.90	1.00	1.10	1.20	1.30	1.60	2.00
2 $\frac{1}{2}$ -inch...	..	..	..	..	1.50	1.85	2.40
3 -inch...	..	..	..	..	1.75	2.25	2.80

Packed in 1 gross boxes.

Bright Wire, Discount

%

Cadmium Plated, Discount

%

* $\frac{7}{8}$ " No. 9, 1" No. 10, 1 $\frac{1}{4}$ " No. 12 and 1 $\frac{1}{2}$ "

No. 12 can also be furnished in the Hot Galvanized Finish, and in Solid Brass.

LAG SCREWS

Gimlet Point

Black and Galvanized



Length	Diameter				
Inches	$\frac{1}{4}$ inch	$\frac{5}{16}$ inch	$\frac{3}{8}$ inch	$\frac{7}{16}$ inch	$\frac{1}{2}$ inch
1 $\frac{1}{2}$ inch..	\$2.15	\$2.15	\$2.60	....	....
2 inch..	2.35	2.35	2.85	\$3.55	\$4.45
2 $\frac{1}{2}$ inch..	2.55	2.55	3.10	3.90	4.85
3 inch..	....	2.80	3.40	4.30	5.30
3 $\frac{1}{2}$ inch..	....	3.05	3.70	4.70	5.75
4 inch..	....	3.30	4.00	5.10	6.20
5 inch..	....	....	....	5.90	7.10
5 $\frac{1}{2}$ inch..	....	....	....	6.30	7.55
6 inch..	....	....	....	6.70	8.00

Per Hundred

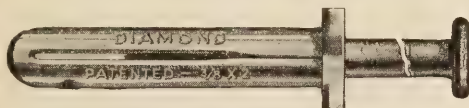
Black, Discount

%

Galvanized, Discount

%

DIAMOND HAMMER DRIVE ANCHORS



Anchors are made of lead preventing rust and corrosion. Nails are hot galvanized. When the nail is driven home, the metal is bonded into the sides of the hole. The nail expands the metal. It is 40 per cent faster working over the old method and much easier.

Packed 100 pieces to a box

Stock Sizes	Size Drill Required	Net Price per 100 Pcs. with Nails
$\frac{3}{16}$ x $\frac{7}{8}$	$\frac{3}{16}$ -inch.....	
$\frac{1}{4}$ x $1\frac{1}{4}$	$\frac{1}{4}$ -inch.....	
$\frac{5}{16}$ x $1\frac{1}{4}$	$\frac{5}{16}$ -inch.....	
$\frac{3}{8}$ x 2	$\frac{3}{8}$ -inch.....	

PEIRCE EXPANSION BOLTS Galvanized



The Peirce Expansion Bolt has an inverted wedge-shaped head and a soft-lead sleeve. The Heads of Bolts are inserted first, the lead sleeve placed over same and tamped into the hole by use of tamping tool. It will pull off the brick before letting go.

	Size	Price Per Hundred
No. 1	$\frac{1}{4}$ in. x $1\frac{3}{4}$ in.....	
No. 2	$\frac{1}{4}$ in. x 2 in.....	
No. 5	$\frac{3}{8}$ in. x $2\frac{1}{2}$ in.....	
No. 11	$\frac{1}{2}$ in. x $2\frac{1}{2}$ in.....	

Extra Lead Sleeves

	Price Per Hundred
$\frac{1}{4}$ in.....	
$\frac{3}{8}$ in.....	
$\frac{1}{2}$ in.....	

Bolts and Sleeves packed 100 pieces in a box.

LAG SCREW SHIELDS

For Stone or Brick—Two Part Style



LEAD

Per Hundred

$\frac{3}{8}$ -in. lag screw by 2 in. length of shield

$\frac{1}{2}$ -in. lag screw by 2 in. length of shield

MALLEABLE—HOT GALVANIZED

$\frac{3}{8}$ -in. lag screw by 2 in. length of shield

Packed 100 pieces to a box

LEAD LAG SCREW ANCHORS

For Stone or Brick—One Part Style



Size Lag Screw	Length	Size Drill	Per Hundred
$\frac{1}{4}$ -inch	$1\frac{1}{2}$ -inches	$\frac{5}{16}$ -inch	
$\frac{5}{16}$ -inch	$1\frac{1}{2}$ -inches	$\frac{3}{8}$ -inch	
$\frac{3}{8}$ -inch	2-inches	$\frac{9}{16}$ -inch	
$\frac{1}{2}$ -inch	2-inches	$\frac{3}{4}$ -inch	

Packed 100 pieces to a box

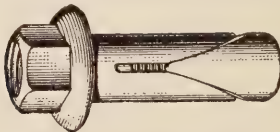
EXPANSION FITTING

Made of Steel

For Securing Fixtures to Stone or Brick

Without the Use of Lead or Wedges

Threaded $\frac{3}{8}$ -inch Pipe Thread



Per Hundred

No. 1 Galvanized



No. 2 $\frac{1}{2}$ x $2\frac{1}{2}$ inch, Galvanized

This fitting should be so set that when expanded the expansion will come where stone or brick is thickest or broadest, thus avoiding any possibility of chipping the stone or brick.

KEYSTONE EXPANSION BOLTS

With Machine Bolts



Size Bolt	Length	Size Drill	Per Hundred
$\frac{5}{16}$ -inch	1 $\frac{3}{4}$ -inches	$\frac{9}{16}$ -inch	
$\frac{3}{8}$ -inch	2-inches	$\frac{11}{16}$ -inch	
$\frac{1}{2}$ -inch	2 $\frac{1}{2}$ -inches	$\frac{7}{8}$ -inch	

Packed 100 pieces to a box

EXPANSION SCREW ANCHOR



Length Inches	Diameter Bolt	Size Hole to Receive Expansion	Per Hundred With Machine Bolts	Without Machine Bolts
$\frac{7}{8}$ -in.	$\frac{1}{4}$ -in.	$\frac{1}{2}$ -in.		
1 in.	$\frac{5}{16}$ -in.	$\frac{5}{8}$ -in.		
1 $\frac{1}{4}$ -in.	$\frac{3}{8}$ -in.	$\frac{3}{4}$ -in.		
1 $\frac{1}{2}$ -in.	$\frac{1}{2}$ -in.	$\frac{7}{8}$ -in.		

One Calking Tool packed in each box of Anchors without extra charge.

Packed 50 pieces to a box

UNIVERSAL ANCHORS



Universal Anchors are furnished in rolls of 24 inches which are scored lengthwise and crosswise so they can be broken off at the score to fit all sizes of wood and lag screws.

Their advantage is that you eliminate stocking many sizes of lead anchors. Anchors can be made for Nos. 8, 10, 12 and 14 wood screws, and $\frac{1}{4}$ ", $\frac{5}{16}$ ", $\frac{3}{8}$ " and $\frac{1}{2}$ " lag screws.

Universal Anchors provide a most secure fastening, are simple to install and require no special tools.

Per Carton

Universal Anchors.....

Each carton contains six rolls of Anchors.

BRICK OR STONE DRILLS



Length, 12 inches

Diameter of cutting edge

Each

No. 0	Cuts $\frac{5}{16}$ -inch hole.....
No. 1	Cuts $\frac{3}{8}$ -inch hole.....
No. 2	Cuts $\frac{7}{16}$ -inch hole.....
No. 3	Cuts $\frac{1}{2}$ -inch hole.....
No. 4	Cuts $\frac{9}{16}$ -inch hole.....
No. 5	Cuts $\frac{5}{8}$ -inch hole.....
No. 6	Cuts $\frac{3}{4}$ -inch hole.....

DI-FORGE TWIST DRILLS



Style C—Rubber Grip Holder

Di-Forge Twist Drills are forged from a solid bar of Vanadium Tool Steel which produces a tougher and more durable drill than can be had by a machine process. The spiral flutes eject the dust and powdered stone as the hole is being drilled.

Rubber Grip Holders accommodate all sizes of Di-Forge Drills. Holders are made of Vanadium Steel, with a soft rubber grip to protect hand of operator.

Di-Forge Twist Drills

Dia-meter	Length Over-all	Depth of Hole	Price Per Dozen	
			Less than 1 Doz.	1 Doz. and Over
$\frac{3}{16}$ -in.	2 $\frac{3}{4}$ -in.	1 $\frac{3}{8}$ -in.		
$\frac{1}{4}$ -in.	3 $\frac{1}{4}$ -in.	1 $\frac{3}{4}$ -in.		
$\frac{5}{16}$ -in.	4 $\frac{1}{4}$ -in.	2 $\frac{1}{2}$ -in.		
$\frac{3}{8}$ -in.	5 -in.	3 -in.		
$\frac{7}{16}$ -in.	5 $\frac{1}{4}$ -in.	3 $\frac{1}{4}$ -in.		
$\frac{1}{2}$ -in.	5 $\frac{3}{8}$ -in.	3 $\frac{1}{4}$ -in.		
$\frac{9}{16}$ -in.	5 $\frac{1}{2}$ -in.	3 $\frac{3}{4}$ -in.		
$\frac{5}{8}$ -in.	5 $\frac{3}{4}$ -in.	4 -in.		

Style C Rubber Grip Holder.....

NOTE: When not otherwise specified, we shall ship Large Shank drills and holders. If Small Shank drills and holders are wanted, please specify when ordering.

HOOK AND EYE TURNBUCKLES

Swivel Eye

Galvanized



DROP FORGED

Per Hundred

No. 1	$\frac{3}{16}$ -in. diameter screw.....
No. 2	$\frac{1}{4}$ -in. diameter screw.....
No. 3	$\frac{5}{16}$ -in. diameter screw.....
No. 4	$\frac{3}{8}$ -in. diameter screw.....
No. 5	$\frac{1}{2}$ -in. diameter screw.....

TURNBUCKLES

Right and Left Hand Bolt Thread



WROUGHT IRON

Per Hundred
Galv.

No. 11	$\frac{3}{8}$ -in. diameter iron.....
No. 12	$\frac{1}{2}$ -in. diameter iron.....
	Standard Bolt Thread.

TURNBUCKLES

Bolt Thread

Galvanized

Per Hundred
Galv.

No. 30	$\frac{3}{8}$ -inch diameter iron by $1\frac{5}{8}$ inches long.....
--------	---

RAWLPLUGS



Rawlplugs are screw anchors made of stiffened strands of tough Jute Fibre compressed together. They hold fast in wood, glass, masonry, plaster, slate, marble, tile, brick or metal. Rawlplugs are not affected by moisture.

Size of Rawlplug	For use with Screw No.	List price per hundred Length of Rawlplugs							
		¾"	1"	1¼"	1½"	2"	2½"	3"	3½"
8	7-8	1.60	1.80	....	2.20	....	....	....	....
10	9-10	1.80	2.05	2.30	2.55	....	....	....	....
12	11-12	2.20	2.45	2.70	2.95	3.45	....	....	....
14	14	....	2.90	3.20	3.50	4.10	....	....	....
16	16	....	3.30	....	4.10	4.90	....	....	....
20	18-20	....	4.90	....	5.90	6.90	....	....	....
¾	Lags	....	....	....	6.50	7.50	8.50	9.50	....
7/16	Lags	....	....	....	7.00	8.50	10.00	11.50	....
1/2	Lags	....	....	....	....	10.00	11.50	13.00	....
5/8	Lags	....	....	....	....	....	13.50	15.00	16.50

Standard Box Packing

Nos. 8-10-12-14 packed 100 pieces in a box.

Nos. 16-20 packed 50 pieces in a box.

¾-in., 7/16-in., 1/2-in., 5/8-in. packed 25 pieces in a box.

Prices of Rawlplugs, Drills and Toolholders
(Per Dozen)

Size of Drill	8	10	12	14	16	20	7/16
	(Corresponding to size of Rawlplugs)						
3 Pt. Drill	6.00	6.00	6.00	6.60	7.20	8.40	10.80
Tool holders	9.00				12.00		

Discount.....%

RAWL-DRIVES



Rawl-Drives are Expansion Bolts of one piece construction, thereby eliminating "lost" parts. They require a hole the same size as the bolt itself, thereby saving drilling time and expense. To install them, simply drive them as a nail. Their holding power is almost three times as great as ordinary commercial bolts. They are Cadmium Plated and have Countersunk Heads, and are packed 100 pcs. in a box.

Diameter of Bolt and Drill	Length of Bolt	Use Rawldrill No.	Per Hundred Cadmium Plated
$\frac{1}{4}$ "	$1\frac{1}{4}$ "	No. 12	
$\frac{1}{4}$ "	$1\frac{1}{2}$ "	No. 12	
$\frac{1}{4}$ "	2"	No. 12	
$\frac{5}{16}$ "	2"	No. 16	
$\frac{3}{8}$ "	2"	No. 20	

TRIANGLE DRILLS

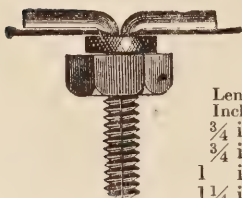
For Hand Drilling



These are forged three-point drills. These drills can be resharpened. Parallel sides maintain life of cutting diameter. Drill chips will not pack in flutes.

Diameter	Length	Per Dozen
$\frac{3}{8}$ -inch	9 inches.....	
$\frac{7}{16}$ -inch	10 inches.....	
$\frac{1}{2}$ -inch	10 inches.....	
$\frac{9}{16}$ -inch	10 inches.....	
$\frac{5}{8}$ -inch	12 inches.....	
$\frac{3}{4}$ -inch	12 inches.....	

SIAMESE TWIN BOLT



Closed

Used to fasten our Head Rod Clamps, Cleats, Slide Rods and other awning parts to Hollow Metal.

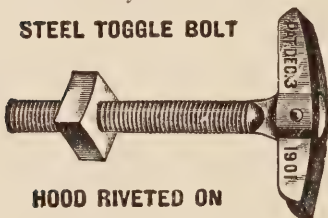
Length Inches	Diameter	Per Hundred
$\frac{3}{4}$ inch	$\frac{3}{16}$ inch.....	
$\frac{3}{4}$ inch	$\frac{1}{4}$ inch.....	
1 inch	$\frac{1}{4}$ inch.....	
$1\frac{1}{4}$ inch	$\frac{1}{4}$ inch.....	

Packed 100 pieces in a box.

STEEL TOGGLE BOLTS

Style No. 1

STEEL TOGGLE BOLT



HOOD RIVETED ON

List Price per Hundred

	Length Inches	DIAMETER		
		$\frac{1}{4}$ -inch	$\frac{3}{8}$ -inch	$\frac{1}{2}$ -inch
3	inch.....	\$10.50	\$20.00	.....
4	inch.....	11.75	24.00	\$32.00
6	inch.....	14.00	31.00	36.00

Discount.....%

Packed 100 pieces in a box

SPRING-IN
TOGGLE BOLTS

These spring toggles have a head of two wings and a spring which forces the wings outward when the head passes through the wall. One end of the spring is extended to prevent rotation of the head while turning in the screw.

List Price per Hundred

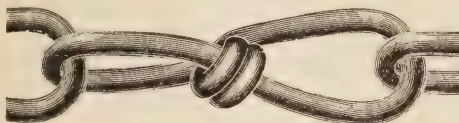
Length	Diameter	
	$\frac{1}{4}$ -inch	$\frac{3}{8}$ -inch
3-inch.....	\$7.85	\$11.50
4-inch.....	8.15	13.50
6-inch.....	8.95	16.50

Discount.....%

Packed 100 pieces in a box.

JACK CHAIN

Galvanized



No. 1/0 per hundred feet.....
Packed in 100-ft. packages.

TACKS

Blued or Galvanized



Blued Price List

Ounce	Length	Hd. Lbs.	Ounce	Length	Hd. Lbs.
4	$\frac{7}{16}$ "		14	$\frac{3}{4}$ "	
6	$\frac{1}{2}$ "		16	$\frac{13}{16}$ "	
8	$\frac{9}{16}$ "		18	$\frac{7}{8}$ "	
10	$\frac{5}{8}$ "		20	$\frac{15}{16}$ "	
12	$\frac{11}{16}$ "				

25-lb. boxes, 100-lb. kegs

If galvanized tacks are wanted, add per
hundred lbs. to the above net prices.

COPPERED STAPLES



Per Pound

$\frac{3}{4}$ -inch long Coppered Staples.....
1 -inch long Coppered Staples.....
1 $\frac{1}{4}$ -inch long Coppered Staples.....

WIRE AWNING HOOKS

Furnished in Bright Wire, Cadmium Plate
and Hot Galvanized Finishes

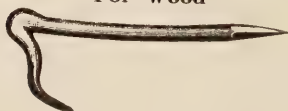


Per Pound
Bright Wire Galv. Cad. Plate

1 1/4 and 1 1/2 inch...
2 inch

AWNING HOOKS

Black Finish
Wrought Iron
For Wood



1 1/4-inch.....
1 1/2-inch.....
2 -inch.....
2 1/2-inch.....

Per Gross

Packed in one gross packages.

Wrought Iron
For Brick



2 1/2-inch.....
3 -inch.....
4 -inch.....
6 -inch.....

Per Gross

Packed in one gross packages

Malleable Iron
For Brick



2 1/2-inch.....
3 -inch.....
4 -inch.....
6 -inch.....
8 -inch.....

Per Gross

Packed in one gross packages

MACHINE BOLTS**Black and Galvanized**

Size	Used on	Per Hundred
$\frac{5}{16} \times 1''$	Nos. 5 and 13 Head Rod Clamp....	
$\frac{5}{16} \times 1\frac{1}{8}''$	Nos. 6, 10, 18, 20 Head Rod Clamps.....	
$\frac{5}{16} \times 1\frac{1}{4}''$	.....
$\frac{5}{16} \times 1\frac{1}{2}''$	.....
$\frac{5}{16} \times 2''$	.....
$\frac{5}{16} \times 2\frac{1}{2}''$	.....
$\frac{3}{8} \times \frac{3}{4}''$	.....
$\frac{3}{8} \times 1\frac{1}{4}''$	.....
$\frac{3}{8} \times 1\frac{1}{2}''$	No. 11 Head Rod Clamp, Truss Rod Braces, etc.....	
$\frac{3}{8} \times 1\frac{3}{4}''$	.....
$\frac{3}{8} \times 2''$	.....
$\frac{3}{8} \times 2\frac{1}{2}''$	.....

Other sizes can be furnished.

STOVE BOLTS**Round Head Galvanized**

Size	Used on	Per Hundred
$\frac{1}{4} \times 1\frac{1}{8}''$	Nos. 1 and 4 Jaw Ends, Nos. 0-1-2 Bracket Hinges, No. 5 Jaw Slide..	
$\frac{1}{4} \times 1\frac{1}{4}''$	No. 2 Jaw End, Nos. 20-21-22 Pipe Clamps, Nos. 1-2-4-5-6 Knuckle Joints, 2''-3''-4'' Plate Stubs.....	
$\frac{1}{4} \times 1\frac{3}{8}''$	Nos. 5''-6'' Plate Stubs, Nos. 10-11- 12-13-14-15-16 Jaw Stubs, Hook Coupling, No. 3 Pipe Clamp.....	
$\frac{1}{4} \times 1\frac{7}{8}''$	Nos. 12-13-14 Clamp Hinges.....	
$\frac{5}{16} \times 1\frac{1}{4}''$	No. 6 Jaw Slide, No. 9 Roller Slide.	
$\frac{5}{16} \times 1\frac{1}{2}''$	No. 4 Pipe Clamp, No. 5 Jaw with lag, all Plate Stubs from 7'' to 12''	
$\frac{3}{8} \times 1\frac{1}{2}''$	No. 24-25 Pipe Clamp.....	

Other sizes can be furnished.

MACHINE SCREWS**Round Head Galvanized**

Size	Used on	Per Hundred
$12-24 \times \frac{19}{32}''$	No. 0 C. B. Hinge, No. 3 Jaw Slide	
$12-24 \times \frac{11}{16}''$	No. 1 C. B. Hinge, No. 4 Jaw Slide	
$12-24 \times \frac{3}{4}''$	Nos. 2 and 3 C. B. Hinge, No. 10 Jaw Slide.....	
$16-20 \times 1''$	No. 11 Jaw Slide.....	

NUTS**Galvanized**

		Per Hundred
$\frac{5}{16}$ inch	For Side Nut Hinges and Slides	
$\frac{7}{16}$ inch	For Nos. 1 and 2 Pin Ends.....	

WASHERS**Galvanized**

	Per Hundred
$\frac{1}{4}$ -inch hole.....	
$\frac{5}{16}$ -inch hole.....	
$\frac{3}{8}$ -inch hole.....	
$\frac{1}{2}$ -inch hole.....	

GALVANIZED AWNING TIES



They take the place of tarred marline in fastening awnings to pipe frames. These ties are made of galvanized sheet steel, they are convenient to use, look well and cost little. They can be applied in one-quarter of the time required to make a knot in a string and are much easier to put in place, especially when working in close quarters.

Awning Ties can be used over and over again.

Made in 5½, 4½ and 3½ inch lengths. Put up in paper cartons containing 200 pieces.

Per Hundred

3½-inch Awning Ties.	
4½-inch Awning Ties.	
5½-inch Awning Ties.	

SECTION XII

TENT EQUIPMENT

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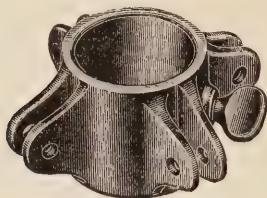
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Equipment

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UMBRELLA TENT SLIDES

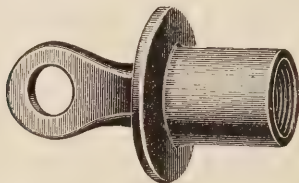
Black Finish Only



$1\frac{9}{16}$ -inch round	Per Hundred
$1\frac{5}{8}$ -inch round	
$1\frac{3}{4}$ -inch round	
$1\frac{3}{4}$ -inch square	

FLANGED EYE END FOR EXTENSION

Arm of Umbrella Tent Slide



Extra heavy construction
Designed to attach guy lines on umbrella tents.

		Per Hundred
		Black Galv.
No. 21	$\frac{1}{2}$ -inch iron or $\frac{1}{4}$ -inch pipe	

EYE END FOR EXTENSION ARM

Of Umbrella Tent Slide

		Per Hundred
		Black Galv.
No. 20	$\frac{1}{2}$ -inch iron	
No. 30	$\frac{3}{8}$ -inch pipe or $\frac{5}{8}$ -inch iron	

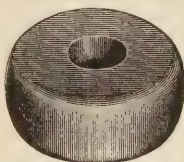
PIN ENDS FOR EXTENSION ARMS

Of Umbrella Tent Slide

		Per Hundred
		Black Galv.
No. 60	$\frac{1}{2}$ -inch iron	
No. 61	$\frac{3}{8}$ -inch pipe or $\frac{5}{8}$ -inch iron	

These pin ends do not have either nuts or threads.
They are tapped only.

WOOD TENT BUTTONS



Per Hundred

Small.....
Large.....

TENT SLIDES



All Sizes
Smooth and Well Seasoned
Wood

Per Hundred

Tent Slides.....



Metal
Galvanized

Per Hundred

Metal Tent Slides.....



TENT STAKE FERRULES

Malleable Iron

Inside Diameter Large End

Per Hundred

No. 1	1½-inch inside diameter.....
No. 2	1¾-inch inside diameter.....
No. 3	2 -inch inside diameter.....
No. 4	2¼-inch inside diameter.....
No. 5	2½-inch inside diameter.....
No. 6	2¾-inch inside diameter.....

HARD WOOD TENT STAKES



Per Hundred

12-inch single notch.....

18-inch single notch.....

22-inch double notch, very heavy.....

MALLEABLE IRON STAKES

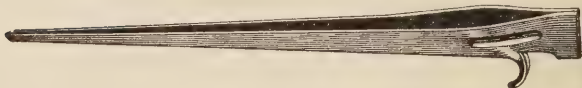


Per Hundred

8½-inch over all.....

13 -inch over all.....

PREMAX STEEL TENT STAKES



Per Hundred

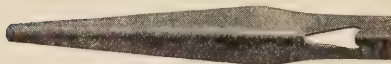
9 inches long.....

12 inches long.....

15 inches long.....

ASTRUP TENT STAKES

Green Enamel Finish



Per Hundred

6 inches long—16 gauge.....

REGULAR IRON STRAPPED WOOD BLOCKS



Loose Side
Hooks



Lignumvitae or Iron
Sheaves



COMMON IRON BUSHED

Lgth of Shell Inches	Size of Sheave, Inches	For Diam- eter Rope Inches	Single Each	Dble Each	Triple Each
3	1 $\frac{3}{4}$ x 1 $\frac{1}{2}$ x $\frac{3}{8}$	$\frac{3}{8}$	\$0.70	\$1.30	\$1.75
3 $\frac{1}{2}$	2 x 1 $\frac{1}{2}$ x $\frac{3}{8}$	$\frac{3}{8}$	.75	1.45	2.00
4	2 $\frac{1}{4}$ x 1 $\frac{5}{8}$ x $\frac{3}{8}$	$\frac{1}{2}$	.85	1.60	2.15
5	3 x 1 $\frac{3}{4}$ x $\frac{3}{8}$	$\frac{5}{8}$	.90	1.75	2.25
6	3 $\frac{1}{2}$ x1 x1 $\frac{1}{2}$	$\frac{3}{4}$	1.10	2.00	2.90
7	4 $\frac{1}{4}$ x1 x1 $\frac{1}{2}$	$\frac{7}{8}$	1.30	2.40	3.50
8	4 $\frac{3}{4}$ x1 $\frac{1}{8}$ x $\frac{5}{8}$	1	1.65	2.85	4.25
9	5 $\frac{1}{2}$ x1 $\frac{1}{8}$ x $\frac{5}{8}$	1	1.85	3.40	4.75
10	6 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{5}{8}$	1 $\frac{1}{8}$	2.75	4.50	6.25
12	8 x1 $\frac{3}{8}$ x $\frac{3}{4}$	1 $\frac{1}{4}$	4.45	7.50	10.65
14	9 $\frac{1}{2}$ x1 $\frac{5}{8}$ x $\frac{3}{4}$	1 $\frac{3}{8}$	7.00	10.50	15.00
15	10 x1 $\frac{5}{8}$ x $\frac{7}{8}$	1 $\frac{1}{2}$	8.00	13.00	18.00
16	11 x1 $\frac{3}{4}$ x $\frac{7}{8}$	1 $\frac{5}{8}$	10.00	15.00	22.00

Discount.....

%

TENT WALL SNAP HOOKS

With Springs



Cadmium Plate

Per Gross

 $\frac{1}{2}$ -inch Eye..... $\frac{5}{8}$ -inch Eye..... $\frac{3}{4}$ -inch Eye..... $\frac{3}{8}$ -inch round Eye.....

Packed in 1 gross boxes

SNAP HOOKS WITH LARGE ENDS

Bronzed

Price Per Gross

Less than
10 Gross10 Gross
and Over

No. 411 $\frac{7}{8}$ " Eye, $2\frac{1}{4}$ -inch over-
all length. Will take $\frac{5}{16}$ -inch
diameter Manila Rope.....

LARGE SNAP HOOKS

Per Gross

 $\frac{3}{4}$ -inch Eye, Japanned.....

Packed in 1 gross boxes

CURTAIN TRIGGER SNAP



Used to fasten down roller curtains

Per Gross

 $\frac{5}{8}$ -inch Black Rubber Finish..... $\frac{5}{8}$ -inch Cadmium Plate Finish.....Packed in $\frac{1}{2}$ gross boxes

EGG SHAPE THIMBLES

Galvanized Malleable Iron



Outside Measure, Longest Way of Thimble

Per Hundred

1½-inch	
1¾-inch	
2 -inch	
2¼-inch	
2½-inch	
2¾-inch	
3 -inch	
3½-inch	
4 -inch	

ROUND SAIL THIMBLES

Galvanized

Outside
Diameter

Per Hundred

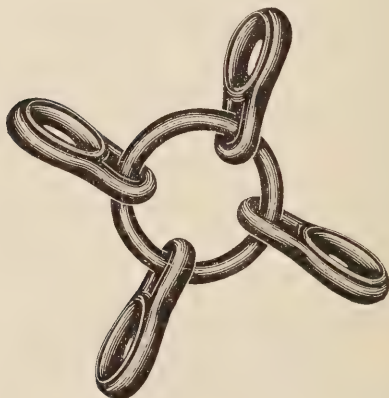
2 -inch	
2½-inch	
3 -inch	
3½-inch	
4 -inch	

RING AND THIMBLE ASSEMBLIES**Galvanized Finish**

No. 1

Each

One each $2\frac{1}{4}$ -inch egg-shape thimble and $1\frac{1}{4}$ -inch round thimble assembled to a steel welded ring size $\frac{3}{8}$ -inch steel by $2\frac{1}{4}$ -inch inside diameter ring



No. 2

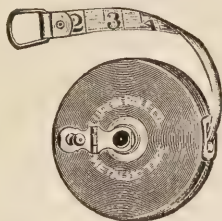
Each

Four $2\frac{1}{4}$ -inch egg-shape thimbles assembled to a $\frac{1}{2}$ -inch steel welded by $2\frac{3}{4}$ -inch inside diameter ring.

Other assemblies can be furnished on receipt of ring and thimble sizes.

METALLIC TAPE LINE

Folding Handle



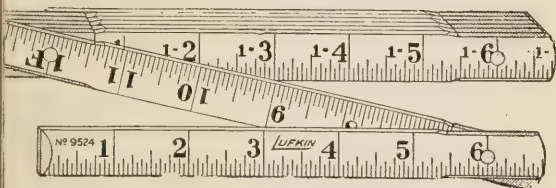
Each

- 25 foot, No. 500, complete.
- 50 foot, No. 503, complete.
- 25 foot, tape only.
- 50 foot, tape only.

Case of genuine Russet Leather, hand stitched, with metal liner and substantial folding handle. The line is $\frac{5}{8}$ inch wide, of linen with metallic warp.

SPRING JOINT RULES

Flexible Six-Inch Folds, $\frac{5}{8}$ Inch Wide
Brass Plated Trimmings



Marked Feet, Inches and 16ths, Both Sides

With instantaneous reading (foot numbers in red and repeated at each inch).

Per Doz.

- 6 foot No. 9526, Yellow Enameled.
- 6 foot No. 9626, White Enameled.
- 8 foot No. 9528, Cream Enameled.

Packed $\frac{1}{2}$ dozen in a box.

- MILL DISTRIBUTORS OF**
ASTRUP "CARDINAL" PAINTED
AWNING STRIPES
"CLEARCUT" PAINTED AWNING
STRIPES
"ARABIAN" FAST VAT SOLID
COLORS
OTIS WOVEN STRIPES
Including
2900 Range
3800 Range
7500 Range
Economy Range
Regular Patterns
VIVATONE WOVEN STRIPES
Including
8 oz. Vivatone
10 oz. Vivatone
Gilt Edge
Regular Patterns
"ROYAL CREST" PAINTED DRILL
"EDGEWATER" PAINTED DRILL
OUNCE DUCK (White and Khaki)
ARMY DUCK (White, Khaki and Viva-
tex Khaki) (Chapel Gray)
WIDE DUCK
WATERPROOF DUCK
"NAPBAK" WATERPROOFED DUCK
COTTON, MANILA, JUTE AND SISAL
ROPE
SPECIAL BRAIDED AWNING ROPE
AWNING BRAID—No. 61
Cotton—any color
Sunfast—any color
CORDED AWNING FRINGE
2 inch and 2½ inch—any color
SUNFAST AWNING FRINGE
2½ inch—any color or combination
AWNING THREAD
MARLINE—Fine Yacht and Medium
WEBBING
SAIL TWINE

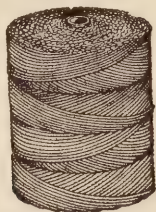
Write for Stock Sheets and Prices

SECTION XIII

TRIMMINGS

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COTTON ROPE

Diameters	Approx. No. feet per Lb.	Approx. Lbs. per Tubes	Per Lb.
No. 1— $\frac{1}{8}$ in.....	220	10	
No. 2— $\frac{5}{32}$ in.....	150	10	
No. 3— $\frac{11}{64}$ in.....	120	10	
$\frac{3}{16}$ in.....	95	25	
$\frac{7}{32}$ in.....	75	25	
$\frac{1}{4}$ in.....	56	35	

Sold on NET WEIGHT basis.
Put up on patent tubes.

BRAIDED AWNING ROPE SASH CORD

Sizes	No. 1	No. 2			
Diameters			$\frac{3}{16}$	$\frac{7}{32}$	$\frac{1}{4}$ inch
Per tube....	Packed in 500 yard tubes				

PLYMOUTH MANILA ROPE

Made in "Ship Brand" Tent Rope and
"Blue Cross" and "Red Oak" Tarpaulin Rope

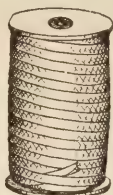
Diameters	Approx. No. Ft. per lb.	Approx. Lbs. per Full Coil	Per Lb.
* $\frac{3}{16}$ -inch 6 thread	77.0	50	....
* $\frac{1}{4}$ -inch 6 thread	60.4	50	....
* $\frac{5}{16}$ -inch 9 thread	39.4	50	....
* $\frac{3}{8}$ -inch 12 thread	29.0	50	....
* $\frac{7}{16}$ -inch 15 thread	19.0	63	....
* $\frac{1}{2}$ -inch 21 thread	13.3	90	....
* $\frac{9}{16}$ -inch	9.61	125	....
$\frac{5}{8}$ -inch	7.52	160	....
$\frac{11}{16}$ -inch	6.67	181	....
* $\frac{3}{4}$ -inch	6.0	200	....

Items marked (*) are stocked in half coils.

MARLINE

Tyrite (Fine Yacht), 1 lb. balls	cts. per lb.
Medium, 1 lb. balls.....	cts. per lb.

AWNING BRAID



No. 61 Cotton

Per Gross Yards
Astrup Priscilla

Unbleached...
Bleached.....
Red.....
Blue.....
Green.....
Brown.....
Gray.....
Khaki.....
Black.....
Tangerine....
Tan.....
Yellow.....

Put up in three gross
yard spools.

SUN AND RAINFAST AWNING BRAID

Per Gross
Yards

Per Gross
Yards

No. 61

Black.....
Brown.....
Terra Cotta...
Tan.....
Blue.....

No. 61

Dark Green
Light Green
Red.....
Tangerine..
Khaki.....

Put up in one gross yard spools.

FIVE (5) PLY JUTE ROPE

Put up in 10 lb. balls.....
Put up in 50 lb. reels.....

Per Lb.

JAVA SISAL ROPE

3 ply Medium Java Rope.....
Put up in 10 lb. balls.

Per Lb.

COTTON SAIL TWINE

4, 5, 6, 7, 8, 10 Ply ($\frac{1}{2}$ lb. to ball) cts. per lb.

CORDED FRINGE

2 INCH AND 2½ INCH

Per Gross
Yards

Unbleached.....	
White, Bleached.....	
Black.....	
Brown.....	
Green.....	
Khaki.....	
Red.....	
Blue.....	
Gray.....	
Tangerine.....	

Put up in 36 yard pieces

SUNFAST CORDED FRINGE

2½ INCH

Solid Colors

Per Gross
Yards

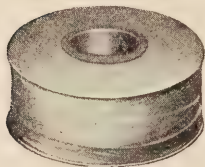
Black.....
Brown.....
Green.....
Red.....
Orange.....
Khaki.....

Color Combination

Per Gross
Yards

Tangerine and Black.
Tangerine and Green
Red and Black....
Khaki and Green....

Put up in 36 yard pieces



BOBBINS

Style "A" Bobbins for use on Singer Machines 16-41, 16-88, 31-15 and 78-1.

Style "G" Bobbins for use on Singer Machines 21W-180, 111W-100, 111W-101, also classes 21W, 22W, 29W, 45W, 110W, 111W and 112W.

Per Gross

16/4 cord, grey, Style A, 4032 yds. Gr....	
16/4 cord, colors, Style A, 4032 yds. Gr...	
12/4 cord, grey, Style G, 2880 yds. Gr....	
12/4 cord, colors, Style G, 2880 yds. Gr...	
16/4 cord, grey, Style G, 3600 yds. Gr....	
16/4 cord, colors, Style G, 3600 yds. Gr...	

WEBBING

Put up in 50 Yard Rolls

Per Hd. Yds.

$\frac{5}{8}$ "	White.....	
$\frac{5}{8}$ "	Brown.....	
$\frac{3}{4}$ "	White.....	
$\frac{3}{4}$ "	Brown.....	
1 "	White.....	
1 "	Khaki.....	
$1\frac{1}{2}$ "	White.....	
2 "	White.....	
2 "	Khaki.....	

**TONGUELESS BUCKLES FOR
WEBBING**

Cadmium Plated

Per Gross

For	$\frac{5}{8}$ -inch Webbing.....	
For	$\frac{3}{4}$ -inch Webbing.....	
For	1 -inch Webbing.....	
For	$1\frac{1}{2}$ -inch Webbing.....	
For	2 -inch Webbing.....	

TIPS FOR WEBBING

Cadmium Plated

Per Gross

For	$\frac{5}{8}$ -inch Webbing.....	
For	$\frac{3}{4}$ -inch Webbing.....	
For	1 -inch Webbing.....	
For	$1\frac{1}{2}$ -inch Webbing.....	
For	2 -inch Webbing.....	

SEWING MACHINE THREAD

Per Tube

$8/2$	cord, grey, silk finish, 1 lb. tubes...	
$10/3$	cord, grey, soft finish, 1 lb. tubes...	
$14/2$	cord, grey, silk finish, 1 lb. tubes...	
$12/4$	cord, grey, silk finish, 3600 yd. tubes	
$12/4$	cord, colors, silk finish, 3600 yd. tubes	
$16/4$	cord, grey, silk finish, 4800 yd. tubes	
$16/4$	cord, grey, soft finish, 4800 yd. cones	
$16/4$	cord, colors, silk finish, 4800 yd. tubes	
$16/4$	cord, colors, soft finish, 4800 yd. cones	
$20/4$	cord, grey, soft finish, 6000 yd. cones	
$24/4$	cord, grey, soft finish, 7200 yd. cones	
$24/4$	cord, grey, silk finish, 6000 yd. tubes	
$30/4$	cord, grey, soft finish, 9600 yd. cones	
$36/4$	cord, grey, soft finish, 9600 yd. cones	
$36/4$	cord, grey, silk finish, 9600 yd. tubes	

AWNING YARDAGE LIST

Yardage of Residence Window Awnings

31" Material

Sum of Height & Projection	WIDTH OF AWNINGS														Deduct for Each End Not Wanted
	2	2-6	3	3-6	4	4-6	5	6	7	8	9	10	11	12	
3-0	3	3	3	3	4	4	4	5	5	6	6	7	7	8	3/4
3-6	3	3	4	4	4	5	5	5	6	6	7	7	8	8	3/4
4-0	3	3	4	4	5	5	5	6	6	7	8	8	9	9	3/4
4-6	4	4	4	4	5	5	5	6	6	7	8	8	9	10	1
5-0	4	4	5	5	6	6	6	7	8	8	9	10	10	11	1
5-6	4	4	5	5	6	6	6	7	8	9	10	10	11	11	1
6-0	5	5	5	6	6	7	7	8	9	10	11	11	12	12	1
6-6	6	6	6	7	7	8	8	9	10	11	12	13	13	14	1 1/2
7-0	6	6	7	8	8	9	9	10	11	12	13	14	15	15	2
7-6	7	7	8	9	9	10	10	11	12	13	14	15	16	17	2
8-0	8	8	8	9	9	10	10	11	12	14	15	16	17	18	2 1/2
8-6	9	9	9	10	10	10	11	12	13	14	15	16	18	19	2 1/2
9-0	9	9	10	10	11	11	12	13	14	15	16	17	19	20	3
9-6	10	10	11	11	12	12	13	14	15	16	18	19	20	21	3
10-0	10	10	11	12	12	13	14	15	16	17	18	20	21	22	3
10-6	11	11	12	12	13	14	15	16	17	18	19	21	22	23	3 1/2
11-0	12	12	13	13	14	15	16	17	18	19	20	22	23	24	4
11-6	13	13	13	14	15	16	17	18	19	20	22	23	24	25	4
12-0	13	13	14	14	15	16	17	18	20	21	23	24	25	26	4 1/2

YARDAGE OF ROLLER AWNINGS

Sum of Height & Projection	WIDTH OF AWNINGS																		Deduct for Each End Not Wanted
	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40		
6-0	15	17	19	21	23	25	27	30	32	34	36	39	41	44	46	49	51	3	
7-0	17	19	21	23	26	28	31	33	36	38	40	43	45	48	50	53	55	3	
8-0	18	21	23	26	28	31	34	36	39	41	44	47	50	53	55	58	60	3½	
9-0	20	23	26	29	31	34	38	40	43	45	48	51	54	57	59	62	64	4	
10-0	22	26	28	32	35	38	41	44	48	50	53	56	59	62	65	68	71	4½	
11-0	25	28	31	34	37	41	45	48	51	54	57	60	63	66	69	72	75	5½	
12-0	27	30	33	37	40	44	48	51	55	57	61	65	68	72	75	79	82	6	
13-0	29	33	36	40	43	47	52	55	59	62	66	70	74	78	81	85	88	6½	
14-0	31	35	38	42	46	51	56	59	63	66	70	75	79	83	87	90	94	7½	
15-0	34	38	41	45	49	54	59	63	67	71	75	80	84	88	92	97	101	8	
16-0	36	40	43	48	52	57	62	66	71	75	80	85	90	95	100	104	108	9	

Yardage figured with approximately 5% allowance for waste.

AWNING YARDAGE LIST

Yardage of Pull-Up Store Awnings

31" Material

Sum of Height & Projection	WIDTH OF AWNINGS																				Deduct for Each End Not Wanted
	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30		
5-0	6	7	8	8	9	10	10	11	11	12	13	14	15	17	18	19	20	22	24	1	
5-6	6	7	8	9	10	10	11	11	12	13	14	15	16	18	19	20	22	24	26	1	
6-0	7	8	9	10	11	11	12	12	13	14	15	16	17	19	20	21	23	26	28	1	
6-6	8	9	10	11	12	13	13	14	15	16	17	18	19	21	22	25	27	28	30	1½	
7-0	9	10	11	12	13	14	15	15	16	17	18	20	21	23	25	26	28	30	32	2	
7-6	10	11	12	13	14	15	16	17	18	19	20	21	22	24	26	28	30	32	34	2	
8-0	10	11	12	14	15	16	17	18	19	20	21	22	23	25	27	28	31	34	36	2½	
8-6	11	12	13	14	15	16	18	19	20	21	22	23	25	27	28	30	33	36	38	2½	
9-0	12	13	14	15	16	17	19	20	21	22	23	24	26	29	30	32	34	37	40	3	
9-6	13	14	15	16	18	19	20	21	22	23	25	26	28	31	33	34	37	40	43	3	
10-0	14	15	16	17	18	20	21	22	23	24	26	27	29	32	34	36	39	42	45	3	
10-6	15	16	17	18	19	21	22	23	24	25	27	29	30	34	35	38	41	44	47	3½	
11-0	16	17	18	19	20	22	23	24	26	27	29	30	32	36	38	40	43	46	49	4	
11-6	17	18	19	20	22	23	24	25	27	28	30	32	34	37	39	41	44	48	51	4	
12-0	17	18	20	21	23	24	25	26	28	29	31	33	35	38	40	42	46	49	53	4½	
12-6	18	19	20	22	23	25	26	27	29	31	33	35	37	40	42	44	48	52	55	4½	
13-0	19	20	22	23	25	27	28	29	31	33	34	36	39	42	44	46	50	54	58	5	
13-6	20	21	23	24	26	28	29	30	32	34	36	38	40	44	46	48	52	56	60	5½	
14-0	21	22	23	25	27	29	30	31	33	35	37	39	41	45	47	50	54	58	62	5½	
14-6	22	23	24	26	28	30	31	33	34	36	38	41	43	47	50	53	56	60	65	6	
15-0	23	24	25	27	30	31	33	34	36	38	40	42	45	49	52	54	58	62	67	6½	
15-6	24	25	26	29	31	32	34	35	37	39	41	43	46	50	53	56	60	64	69	6½	
16-0	25	26	28	30	32	34	35	36	38	40	43	45	48	52	54	57	61	66	71	7	

Yardage figured with approximately 5% allowance for waste.

WIDE COTTON DUCK

Yardage Price List

February 4th, 1935

Width	1	2	3	4	5	6
26 in.	.83	.79	.75	.73	.70	.67
28 in.	.90	.85	.81	.78	.75	.72
30 in.	.96	.91	.87	.84	.80	.77
32 in.	1.01	.96	.92	.89	.85	.81
36 in.	1.13	1.07	1.02	.98	.94	.89
38 in.	1.19	1.13	1.08	1.03	.99	.94
40 in.	1.25	1.19	1.13	1.08	1.04	.99
42 in.	1.32	1.25	1.19	1.14	1.09	1.04
44 in.	1.38	1.31	1.25	1.20	1.15	1.10
48 in.	1.51	1.44	1.37	1.32	1.26	1.21
50 in.	1.57	1.50	1.43	1.38	1.31	1.26
54 in.	1.71	1.63	1.56	1.50	1.43	1.37
60 in.	1.92	1.84	1.76	1.68	1.61	1.54
66 in.	2.14	2.04	1.95	1.87	1.80	1.72
72 in.	2.35	2.24	2.14	2.05	1.98	1.90
76 in.	2.50	2.39	2.28	2.19	2.12	2.02
84 in.	2.80	2.68	2.55	2.46	2.38	2.26
90 in.	3.03	2.90	2.78	2.67	2.58	2.45
96 in.	3.29	3.15	3.01	2.89	2.79	2.66
100 in.	3.45	3.30	3.15	3.03	2.93	2.79
108 in.	3.78	3.62	3.46	3.34	3.22	3.07
120 in.	4.31	4.13	3.96	3.84	3.70	3.52
132 in.	5.03	4.85	4.67	4.55	4.41	4.22
144 in.	5.96	5.77	5.59	5.43	5.21	4.97

Width	7	8	9	10	11	12
26 in.	.63	.59	.54	.50	.45	.40
28 in.	.68	.63	.58	.53	.48	.43
30 in.	.73	.68	.62	.57	.51	.46
32 in.	.77	.72	.66	.60	.54	.48
36 in.	.84	.79	.73	.66	.60	.54
38 in.	.89	.83	.77	.70	.63	.57
40 in.	.94	.87	.81	.74	.66	.60
42 in.	.99	.92	.85	.78	.70	.63
44 in.	1.04	.97	.89	.82	.74	.66
48 in.	1.14	1.06	.98	.90	.81	.73
50 in.	1.19	1.11	1.02	.94	.84	.76
54 in.	1.29	1.21	1.11	1.02	.92	.82
60 in.	1.45	1.36	1.25	1.14	1.03	.92
66 in.	1.62	1.52	1.40	1.28	1.16	1.03
72 in.	1.78	1.67	1.54	1.40	1.27	1.13
76 in.	1.90	1.78	1.64	1.50	1.35	1.21
84 in.	2.14	2.00	1.84	1.68	1.51	1.35
90 in.	2.32	2.16	1.99	1.81	1.64	1.46
96 in.	2.50	2.34	2.15	1.96	1.78	1.58
100 in.	2.62	2.46	2.25	2.06	1.86	1.66
108 in.	2.89	2.70	2.49	2.26	2.05	1.83
120 in.	3.31	3.09	2.85	2.59	2.35	2.10
132 in.	3.98	3.73	3.43	3.14	2.85	2.55
144 in.	4.71	4.43	4.09	3.76	3.42	3.06

Subject to trade discount

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